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SUMMARY

OF THE

TRANSACTIONS

OF THE

COLLEGE OF PHYSICIANS

OF

PHILADELPHIA.

VOLUME I.—NEW SERIES.

FROM NOVEMBER, 1850, TO APRIL, 1853, INCLUSIVE.

NON SIBI SED TOTI.

PHILADELPHIA:
LIPPINCOTT, GRAMBO, AND CO.
1853.

SUMMARY

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COLLEGE OF PHYSICIANS

OF PHILADELPHIA.

FROM NOVEMBER 5, 1850, TO JANUARY 6, 1851, INCLUSIVE.

Stated Meeting, November 5, 1850.

Dr. WOOD, President, in the chair.

Present, thirty members.

DR. JOHN R. TUFT was duly admitted a Fellow of the College.

The following gentlemen were elected the publishing committee for the ensuing twelve months:—

D. FRANCIS CONDIE, ISAAC PARRISH, SAMUEL JACKSON.

PNEUMONIA IN CHILDREN.

Dr. J. F. MEIGS read the histories of three cases of pneumonia, as illustrative of the difficulty which often attends the formation of a correct diagnosis in that disease, when it occurs in young children.

Inflammation of the lung (Dr. M. remarked) is very easily recognized in early life, when it assumes, as it generally does, its frank and open form. When the rational symptoms of the disease—the cough, pain in the chest, rapid breathing, high fever, and great thirst—are present in a marked degree, there is no difficulty in understanding that the patient is laboring under a

pulmonary inflammation. The greater dryness of the cough in the beginning, the greater intensity of the pain, the higher grade of the fever, and the smaller amount of wheezing, as heard independently of auscultation, will almost always allow us to distinguish even between pneumonia and bronchitis, without a resort to the physical means of diagnosis. But when, on the contrary, the local symptoms are slightly marked, or almost null, and when, from some peculiarity of the individual, the chief symptoms in the case are such as would seem to indicate disease of some other system of the body, as the nervous or digestive, the diagnosis of the pulmonary inflammation becomes exceedingly difficult, and, to one who either neglects or is unable to avail himself of the benefits of auscultation and percussion, impracticable. So obscure, indeed, in some instances, are the rational signs of pneumonia in children, and so prominent are those appearing to indicate disease of some other part of the body, that the attention is drawn away almost irresistibly from the real seat of mischief, and the true nature of the illness is misunderstood, until, from the further development of the case, the pulmonary symptoms grow into greater significance, or, from the very darkness which hangs over the diagnosis, the physician resorts to a thorough physical examination, and so detects the existence of the pneumonia.

Now the causes which tend to embarrass the diagnosis of this inflammation in children may be referred, it seems to me, to two principal conditions: first, that in children the nervous system is so much more susceptible to the action of disturbing agents, and therefore so much more apt to suffer derangement of its functions in all states of disordered health, that the symptoms issuing out of this circumstance assume at that period of life much greater severity and prominence than at later periods. Second, that in children the physical signs of thoracic disease are much more obscure and uncertain than in adults, because of certain physiological and pathological differences which characterize the former age.

Amongst these conditions, the most prominent are the following: The thorax is naturally so much more resonant in early life as to afford a much less certain indication, by dullness on percussion, of the presence in the thoracic cavity of conditions diminishing the amount of inspired air; or, in other words, the

healthful sonoriety of the chest is so great as to permit of a certain degree of induration of the tissues of the lung, which yet shall not be appreciable to an ear of ordinary acuteness or cultivation, because there still remains an amount of sound on percussion sufficient to deceive the great majority of observers.

A second cause of difficulty, connected, like the last, with the physiological construction of the thorax, is the fact that the respiratory murmur in the child is much louder and stronger than in the adult; it is, in fact, puerile; it has somewhat of a blowing or bronchial sound, and therefore renders the detection of bronchial respiration, one of the most important signs of pneumonia, much less easy and positive than during the maturer periods of life.

In addition to these two causes connected with the physiological conditions of childhood, we have certain pathological states to increase the embarrassment under which we labor. The most important of these is that pneumonia is so often double as to make us lose very frequently the advantage of the comparison of the two sides; and, unless care is observed, the physician is led into error, by falsely concluding, from the fact of the two sides being equally sonorous, that the sound he elicits is natural; whereas, in truth, both sides are considerably duller than they ought to be. Again, from some cause, crepitant râle is much less to be depended upon in the child than in the adult; either because it is really absent, or because the ear is unable to detect it, owing to the child's refusing or being unable to distend the thorax sufficiently to cause the air to enter a sufficient number of the air-cells to produce this particular morbid sound.

Last, but not least, our means of diagnosis are still further restricted by the opposition which the child so often makes to the examination. Who has not been annoyed and tormented, and even foiled, when the case is an obscure one, and therefore requiring great delicacy of perception, by the patient's resisting with cries, and screams, and struggles, every attempt at a proper exploration? Or, if not foiled, how much more uncertain and unsatisfactory are the results obtained under these circumstances than they are in the instance of adult patients!

After these prefatory remarks upon the subject to which I have requested your attention, I shall proceed to relate the his-

tory of three cases that occurred in my own practice—cases which I hope will not weary, by their detail, the patience of the College, since they are strongly illustrative of the perplexing symptoms which sometimes accompany, and which tend to mask, the pneumonia of children.

The first case is one in which the onset of the disease was so much like that of meningeal inflammation as to render the diagnosis very difficult in its early stage. It is as follows: A fine, hearty boy, between six and seven years of age, born of very healthy parents, both of whom were living, had an attack of anginose scarlatina, of moderate severity, in the month of April. He recovered from this sickness without any difficulty, and resumed his attendance at school. On Wednesday, the 15th of May, he was seized with the symptoms of cold in the head, and had some fever, and a severe earache. On Thursday, he was much better. On Friday, he was rather imprudently taken out to ride, the weather being raw and disagreeable, and he consequently fell sick again on the evening of that day. The next day, Saturday, he had violent fever, much pain in both ears, severe frontal headache, and great sensibility to light when exposed to it. He was at the same time very drowsy, sleeping nearly the whole day, but could be roused when loudly and vehemently spoken to, so as to answer a few questions, and manifest great irritability. There was, in connection with these symptoms, frequent vomiting. The bowels had not been moved. There was no cough whatever. The respiration was slightly quickened. I suspected an attack of pneumonia, but could not detect it upon the most careful examination. I prescribed for him two grains of calomel in a dessertspoonful of castor oil, and a strong mustard foot-bath.

On Sunday (2d day), the symptoms were much the same. The headache was very severe, and the only thing complained of. The sensibility to light continued excessive. There was frequent vomiting—the smallest quantity of water, even, being generally rejected at once. The bowels had been freely moved. There was no full cough, but he had given a short hack two or three times. The respiration was decidedly accelerated, rising to 35 or 40. The skin was hot and dry, and the pulse 130 in the minute, and at the same time rather hard, but perfectly regular. I still suspected pneumonia, but could not help feeling

uneasy in regard to the brain, particularly as the most careful exploration failed to reveal any signs of pneumonia. I ordered iced lemonade and sweet spts. of nitre as the remedy, with cloths wet with cold water to the head, a mustard foot-bath twice a day, and a mustard poultice to the epigastrium.

Monday, (3d day.) No change, except that the respiration has risen to 45 in the minute, unattended, however, by any labor or difficulty whatever. He has coughed three or four times again. The cough is short and dry, and not painful. The pulse is 132, jerking. The vomiting continues, with most distressing retching. The tongue is clean, moist, and disposed to be reddish. Auscultation to-day revealed well-marked bronchial respiration, before and behind, over the upper lobe of the right lung, but no râle whatever. Over the same region the percussion was dull. The prescription was leeching to four ounces over the right scapula; acetum opii one drop every two hours; a mustard poultice over the front of the thorax, and a mustard foot-bath.

Tuesday, (4th day.) Better. Less fever. Less headache. Eyes not so sensitive to light. Vomiting has moderated, though it still recurs from time to time. To take the black drop occasionally.

Thursday, (6th day.) The fever has disappeared. The cough is much more frequent than before, and loose. Percussion over inflamed point less dull. The bronchial respiration is being replaced by vesicular murmur. Black drop at night; diet to consist of milk and bread, ice-cream, etc.

Saturday, (8th day.) The patient is convalescent. He coughs but little, not more than half a dozen times a day, and then loosely. There is no fever. No vomiting for the last two days. Head clear. Tongue red, clean, moist. No appetite. No pain of any kind. Sleeps well, and takes no medicine. The dullness on percussion is diminishing, though still very clearly marked. Bronchial respiration much less distinct. To-day, for the first time, I can hear, just at the end of a long inspiration, which he now voluntarily takes for me, a very fine, but distinctly perceptible crepitant râle.

From this time he rapidly and entirely recovered.

Remarks.—This case appears to me a very interesting one from the obscurity which attended it at the onset. A healthy

boy, between six and seven years old, who has had a slight cold in the head, with earache, but who has apparently recovered, is taken out to ride. On the evening of that day, he falls sick again; and on the following day when I see him, I find him suffering with severe fever, violent headache, and pain in both ears. He is at the same time exceedingly drowsy and inattentive, and when partially roused from this condition, complains bitterly of the light, and is very cross and irritable. He has no cough whatever, and, beyond slightly quickened breathing, no symptom of thoracic inflammation. He has frequent vomiting, rejecting nearly everything that he takes, even to water. His bowels had not been moved within a day.

Now, what was the nature of this attack? Was it meningitis? Scarcely tubular meningitis, since the attack was so sudden and the patient healthy, and descended of vigorous parents. Was it acute simple meningitis? This was more probable, especially if we adopt the idea of an extension of inflammation from the structures of the ear to the coverings of the brain. But there was no delirium whatever, which there would probably have been had meningeal inflammation gone far enough to have produced the drowsiness and sensibility which the child evinced. Moreover, the pulse was not over 130, and the skin not intensely hot, which would almost certainly have been the case had the attack been one of the kind I am supposing. Add to these considerations, those of the child's having had a cold, and just as he was recovering, having been exposed, during a ride, to a raw May wind. Explain his vomiting by the circumstance that he and all his brothers, of which there were several, inherited from their mother a strong disposition to that symptom in all their attacks of sickness, and I think there were reasons enough for hoping that the nervous symptoms, under which he labored, and which, for the time being, were the only ones he presented, depended not upon cerebral disease, but were sympathetic merely with some local inflammation of another and distant organ; and what organ so likely to be the seat of the trouble as the lung?

On the next day, when I heard that he had coughed several times, that the bowels had readily responded to medicine, and that his nervous symptoms had made no progress, which they ought to have done had they depended on inflammation of the

meninges, I felt still more convinced that the case must be one of pneumonia, though I could not as yet detect any signs of that disease by the most careful physical exploration. On the third day, however, the nature of the attack became clear and decided, for I detected dullness on percussion and bronchial respiration over the upper lobe of the right lung. There was no longer any doubt or obscurity, though the stupor, sensibility to light, and vomiting, remained unabated.

I shall next detail the history of a case intended to show how serious and how conspicuous the nervous symptoms sometimes become in the latter stages of pneumonia. I select this case because it affords a very strong example of the extreme gravity which this class of symptoms occasionally presents at that period of the disease, and because, also, it shows how mistaken is the notion that severe cerebral symptoms, occurring in the course of various local inflammations, depend generally upon a transfer of diseased action to the brain: whereas, in fact, they are almost always merely sympathetic phenomena; or still more frequently are occasioned by that state of the blood which comes at last to be produced by the imperfect performance of the hæmatosic function in diseases of the respiratory organs, or by the debilitating influence of long sickness, and insufficient supplies of food in diseases of other parts of the body. The case is as follows:—

On Thursday, the 21st November, I was requested to take charge of a child who had been ill for seven days under the care of another physician. I was sent for because the original attendant had been obliged to leave town. I was told that the case was one of cold on the chest, in which the disease had left the chest to remove to the brain; that the child was entirely unconscious, excessively prostrated, and, in fact, supposed to be in a dying condition. The parents hoped for nothing from medical treatment, but wished that everything might be done to satisfy their sense of responsibility.

The real history of the case prior to my first visit was this: The patient was a girl, between two and three years old, of rather delicate appearance, though seldom sick, and the child of delicate parents, the father having been attacked since his daughter's illness with hæmoptysis followed by many phthisical symptoms. She was taken sick on the 29th of November with slight laryngitis, threatening croup. This was followed by mild

catarrh, of which she convalesced on Monday, the 4th of December, under the care of the family physician. She remained well now until Tuesday, December the 12th, when she was again seized with cough and fever, and the physician was again sent for. This gentleman now attended her daily until Saturday the 16th, when he thought her better. During these five days, she had cough, quick breathing, and fever, and on Thursday morning some threatening brain symptoms, for which a blister was applied to the nucha. On Sunday, the sixth day of her sickness, she was dull and indifferent. On Monday she scarcely recognized her mother, and on Tuesday not at all. During all this time, and up to Thursday, December 21st, the tenth day of the sickness, when I first saw the child, she had had no spontaneous vomiting, but had vomited several times after taking her medicine, which consisted of a calomel and tartar emetic mixture. She was not constipated, but had regular daily evacuations. The treatment had consisted at first in the use of a calomel and tartar emetic mixture, and afterwards of blue pill and rhubarb. A blister had been applied to the nucha as already stated.

At my first visit, on the 10th day of the sickness, I found the patient, in truth, in a most alarming condition. My notes give the symptoms as follows: The face is pale and even white, the eyes closed, and the expression dull and stolid. The lips are of a pale red tint, and dry and cracked. The child is very drowsy, indeed almost comatose. She can be roused with only great difficulty enough to glance around languidly and heavily at my watch, for a moment, and then immediately relapses into coma. The eyes are dull and dim, and there are many incrustations about the lids. She neither speaks nor attempts to speak; she recognizes no one, and has neither asked nor made any sign indicative of a wish of any kind. There is no appetite, and no thirst. The pulse is frequent, small, and feeble, and the hands and feet cold, requiring bottles of hot water to maintain any warmth in them. The head and throat are slightly warmer than natural, but not hot. The respiration is 52, short and noiseless, except that a fine wheezing can be heard when the ear is approached near to the chest. There is very little cough—it is short, slight, and rather loose. Auscultation reveals sub-

crepitant râle over both sides behind. Percussion affords nothing very decided.

I ordered a mixture consisting of six grains of carbonate of ammonia and twelve of quinine in three ounces of vehicle, of which a teaspoonful was to be given every two hours. A dessertspoonful of wine whey was to be given every two hours also, and a tablespoonful of chicken tea occasionally. A blister an inch and a half square was applied to the calf of each leg, to be removed at the end of an hour and a half or two hours; and bottles of hot water were kept in contact with the feet, and laid along the sides of the body.

11*th day*.—No very decided change, except that the extremities are somewhat warmer, the pulse a little fuller, and the patient rather more easily roused from her state of insensibility. The remedies to be continued, and a cathartic enema to be administered to open the bowels, which have not been moved.

12*th day*.—Injection operated once last evening. Bowels opened again this morning. Stools natural. Temperature good. Rather more color in the face. Patient more intelligent, and much more easily roused; observes her mother, and recognizes her for the first time, but makes no attempt to speak. She is very weak, trembling very much on the least attempt at motion. Pulse fuller and stronger. Respiration easy. Takes her food readily. Continue treatment.

13*th day*.—Decidedly better. Is now wide awake, with a natural and intelligent expression of countenance. Face much less pale; lips well colored, and less dry; eyes less dull; evidently recognizes those around her, though she does not attempt to speak as yet. Whole surface warm and dryish, and the hands rather hot indeed. Pulse 120, fuller, and stronger, though still small. Respiration 60, not quite regular, short, but without any labor. Cough much more frequent than before, and stronger. It occurs sometimes in spells, and is disposed to be loose, though still rather hard. No vomiting. Bowels opened twice since last night; the dejection being natural, but rather free. Takes her food very well. Not very thirsty. The abdomen is somewhat full, but soft and supple; some tympany. The patient picks her nose and lips a great deal, and on the 9th and 10th days picked the skin over the neck and upper part of the sternum so much as to produce angry-looking pimples and

excoriations. Auscultation reveals to-day vesicular murmur, rather feeble, over the front of the thorax, vesicular murmur over the upper part of the chest behind, and fine subcrepitant râle, with bronchial respiration both in inspiration and expiration, over the lower half of both sides behind. Percussion is somewhat dull over the lower part of the dorsal region, and is rather less clear on the right than on the left side.

The carb. amm. and quinine mixture is to be suspended, and a teaspoonful of a mixture consisting of four grains of iodide of potassium in half an ounce of sarsaparilla syrup, and an ounce and a half of water, is to be given every three hours; wine whey to be continued. Diet to consist of chicken tea, and milk and water. One grain of Dover's powder to be administered every evening.

On the 14th day, the child cried loudly and obstinately for the first time, and for the first time in many days shed tears. The pulse was 124, of good volume, soft and regular. The breathing was 70, high, regular, and without effort. Skin warmer than natural, and dry; tongue moist, and covered with dark brown fur.

On the 16th day, I found her slowly improving in strength. She now remains awake the greater part of the day, and is much amused with her toys; the appetite is moderate, and the thirst not too great; the cough is more frequent, occurs in spells, and is rather hard. Has had no natural stool to-day; the pulse is between 120 and 130, rather small and feeble; the breathing is 50, still high, but not labored. The respiratory sound is feeble, and attended with some expiratory blowing, and a fine rare subcrepitant râle over the lower half of both lungs behind; percussion over same regions is slightly duller than natural, and a little more so on the right than on the left side. Tongue clean and moist; lips dryish, and much picked at by the child; abdomen natural; soft. Sleeps well at night with the Dover's powder.

The mixture of iod. potass. to be continued; milk punch to be given in the dose of a tablespoonful every three hours. Ice-cream, rice gruel, and a little chicken for diet. The grain of Dover's powder to be given at night.

From this time the patient continued to go on very favorably in every respect, so that on the 21st day of the illness the pulse

had fallen to 95, and the respiration to 35; whilst the strength was rapidly improving, and the cough had become much less frequent and looser. The bowels were regular; there was no diarrhœa. The appetite was increasing, the thirst had disappeared, and the spirits had become much more cheerful and pleasant.

The iod. potass. was suspended on the 18th day, and a little syrup of ipecacuanha and sweet spirits of nitre substituted; a few drops of brandy were given several times a day in the place of the milk punch.

On the 24th day, the patient was entirely convalescent, as she was gaining flesh, and was able to sit up and amuse herself.

Remarks.—When I was called to see this case, it was supposed by the family, who were guided by the opinion of the first physician, to be one of disease of the brain, and on that ground was thought to be desperate beyond hope. The opinion of the first practitioner was clearly indicated likewise, by his having applied a blister to the nucha on the third day of the attack, in consequence, it was stated, of some threatening brain symptoms. Upon first seeing the patient indeed, and noticing the extreme stupor, amounting very nearly to perfect coma, I was for a time apprehensive that the case was in reality one of those fatal affections of the great nervous centre which so rarely yield to the art of the physician. As soon, however, as the history of the case had been fully detailed, I was led to form another opinion in regard to its nature, and one, too, which allowed me to hope that it might yet be turned from the dangerous direction which it had assumed. In fact, the onset of the attack was evidently that of a pulmonary inflammation, and not of cerebral disease. The cough, the quickened respiration, the absence of spontaneous vomiting, of marked constipation and of delirium, all looked unlike the approach of meningitis;—and when, in addition to these circumstances, I found that there still remained some glimmering of intelligence, that there had been no spasmodic phenomena, that there was neither dilatation of the pupils nor irregularity in the direction of the eyes, and that a proper examination of the rational and physical respiratory symptoms showed clearly that the child was affected with an extensive catarrho-pneumonia, I had no hesitation in believing that the

real disease was inflammation of the bronchia and of the parenchyma of the lungs, and that the dangerous nervous symptoms, which had created so much alarm and even hopelessness, were not primary phenomena, and therefore almost necessarily fatal, but merely secondary or consequential, and for that reason very much less to be dreaded. Guided by this view of the case, I determined to sustain, and, if possible, to revive, the sunken forces of the patient; and by thus gaining time, and restoring to the circulatory and nervous functions some degree of energy, I hoped that nature might yet be able to carry on the changes necessary in the diseased structures to restore to them their healthful condition. Effectually, after a few days, I had the great satisfaction to behold my efforts crowned with success. As the pulse became fuller and more active, as the diminished calorific power became invigorated, and as the digestive and absorbing functions grew stronger and more capable of fulfilling their offices, I could perceive that the respiration was augmented in frequency and power, that the cough became more frequent and looser, and that the lungs were gradually and surely relieved of the products of inflammation which had previously been obstructing and impeding those changes in the blood which are so essential to the due extrication of the life forces.

I shall now proceed to the history of the last case by which I aim to call the attention of the College to the point I am endeavoring to elucidate—to wit, some of the conditions which so often complicate and obscure the diagnosis of pneumonia in children.

The subject of the case was a boy, between four and five years of age, of healthy and robust appearance, and born of parents of good, though not vigorous health. This child was seized suddenly, six weeks after an attack of measles, of which he had apparently entirely recovered, with violent fever, great restlessness and distress, vomiting, and distension of the abdomen. When I first saw the patient, these were the only marked symptoms he exhibited. There was nothing to call my attention particularly to the thorax, and I was led to suppose that the fever depended on some gastro-intestinal disorder, from improper eating. A dose of castor oil was administered, to be followed by sweet spirits of nitre, and a warm bath was ordered. On the second day, he was much worse. The fever was very high, the

skin being hot and dry, and the pulse 160 in the minute by the watch, and jerking. He was now very drowsy and heavy, it being almost impossible to obtain any answers from him, and when obtained they were confused and unintelligible. When disturbed by the examination, his movements were tremulous and uncertain. The tongue was dryish, and very thickly coated. He complained confusedly of pain in the abdomen, which was still distended, and sonorous on percussion. There was no sign of respiratory disease, except some quickening of the breathing, and a very slight cough, scarcely to be noticed. I began to suspect that the attack was one of scarlatina, from the extreme quickness of the pulse, which continued at 160 in the minute, from the drowsiness, and from the tremulous, almost spasmodic, character of the muscular movements. Fortunately, however, I was induced, by the obscure character of the symptoms, the increased frequency of the breathing, and the occasional occurrence of a slight cough, to auscultate and percuss the chest. This I was enabled to do only very hastily, and with much difficulty, owing to the boy's unwillingness to submit to the necessary position. I found that the respiration was feeble and obscure over the lower part of the left side behind, and that the percussion was dull over that region. This determined me at once as to the real nature of the sickness. It was pneumonia. I bled him immediately to five ounces from the arm, which I had feared to do before, lest the attack might be one of scarlet fever. Two hours after the bleeding, the pulse had fallen to 140 from 160, which it had been before. The heat of the skin was very considerably diminished soon after the abstraction of blood, and the patient passed a quiet night. The internal remedy consisted of very small doses (30th of a grain) of tartar emetic, with sweet spirits of nitre, every two hours. On the following day, the third, he was much better; the drowsiness and disposition to coma having passed away, the movements became steady, and the heat of skin much reduced. On the fourth day, he was out of danger. As the case went on, the signs of pneumonia became unequivocal. The blood drawn on the second day presented a firm, small coagulum, covered with an abundant buffy coat. The recovery took place in the ordinary time, and was perfect.

Remarks.—This case was rendered obscure by the fact that the nervous and abdominal symptoms were so severe and promi-

nent as to mask almost entirely the thoracic symptoms. The pulmonary symptoms were indeed not only concealed by the superior and unusual conspicuousness of the nervous and abdominal phenomena, but they were themselves much less marked than in ordinary attacks of pneumonia. It may seem a very easy task, to any one who has heard the above case detailed, to have made the diagnosis of pneumonia. But let him who so thinks imagine a boy between four and five years old, of nervous and vehement disposition, somewhat spoiled in temper withal, to be taken sick suddenly, with violent fever, pain in the abdomen, flatulent distension of the bowels, so little cough as not to be noticed by the attendants, no evident labor of breathing, heavily coated tongue, and strong disposition to drowsiness. Suppose the child to be still worse on the following day, with a pulse at 160; with stupor, amounting almost to coma; tremulous and uncertain movements; confused complaints of pain in the stomach; distension of the abdomen; a cough so slight as to be recollected by the attendants only after the strictest examination; no labor of respiration, but merely such an acceleration of its rate as would almost infallibly accompany a pulse of 160: suppose, too, that all this occurs during a season when scarlet fever is prevailing epidemically, and I will ask any one here present whether the symptoms were not such as might readily lead the mind to suspect an attack either of scarlatina, or, if the abdominal symptoms were chiefly considered, of typhoid fever, rather than one of pneumonia? In fact, I was assisted in the case by a most acute and experienced practitioner, and he was even more disposed than myself to conclude that the attack was a scarlatinous one, in which the eruption had failed to make its appearance. Fortunately, as has already been said, I was induced, after finding out by minute inquiries of the attendants that the patient had coughed a few times, to examine the chest; and though the examination was necessarily rapid and imperfect, the result was such as to convince me that the disease was a latent pneumonia. The bleeding and tartar emetic, which were employed as a consequence of this discovery, exerted a most satisfactory influence upon the symptoms, and the child was very soon out of all danger.

I regret, gentlemen, that the details of the case last read to you are so meagre and imperfect, but I give them from my notebook as they were written down under a press of occupation. I

can safely, however, make the assertion that they are correct as far as they go; and I have not been deterred, therefore, by the want of greater copiousness of detail, from offering the case to the College as an example of the obscurity which sometimes occurs in the diagnosis of pneumonia in children.

Dr. PEPPER agreed with Dr. Meigs as to the general views advanced by him in relation to the obscurity of the diagnosis in pneumonia occurring in very young patients. When the disease occurs as a secondary affection, after the acute exanthemata, for example, it most commonly affects both lungs, and the indications derived from auscultation are then of a less satisfactory nature than in idiopathic cases, when the inflammation is usually confined to one lung. Here the physical signs are well marked. Another difficulty in the diagnosis of pneumonia in infants is the absence of expectoration. There is an equal obscurity in the diagnosis of pleurisy in very young patients. The brain symptoms, it is true, are seldom so prominent as in pneumonia, and consequently the pleuritic inflammation is not liable to be obscured from that cause; but the abdominal symptoms (pain and constipation) are often remarkably prominent. In two cases Dr. P. has known pleurisy in the infant to be mistaken for colic. Obstinate costiveness is very liable to be present in such cases; the child, in consequence of the pain, is deterred from making an effort to evacuate his bowels, and purgative medicines often fail to act.

Even in adults, pneumonia is not unfrequently attended by delirium and other cephalic symptoms, by which the disease of the lungs may be effectually masked. In the insane, pneumonia is often latent, and makes serious progress before its presence is detected.

Dr. Pepper remarked upon the extreme slowness of recovery in many cases of pneumonia in children. The pulse will remain irritable, the strength prostrated, the breathing short and hurried for a long time after all the acute symptoms have disappeared. A hepatized condition of the lung may, in fact, continue to be detected by auscultation many weeks after the patient has apparently recovered.

Dr. Pepper is in the habit, whenever, in young children, there is considerable fever and accelerated respiration, to aus-

cultate daily—when, often, pneumonia will be finally detected in cases where its presence would not otherwise have been suspected.

Dr. MEIGS replied that, although he agreed with Dr. P. in the propriety of a daily examination of the chest in cases of severe disease occurring in young children, yet he would not confine it to those in which the patient was affected with fever and hurried respiration. Where the nervous symptoms are prominent, not only are the local symptoms of pneumonia obscured, but frequency of respiration is not observed; hence in latent pneumonia this latter symptom affords us no aid in our diagnosis. There was, he remarked, certainly less difficulty when the pneumonia is confined to one lung than when it attacks both lungs; for, in the latter case, we are deprived of the indications to be derived from a comparison of the physical signs observed on the diseased with those presented by the sound side. The object Dr. Meigs had in view in presenting the histories of the cases detailed by him was to show, not that in many cases the presence of pneumonia could not be readily detected in young children, but that often its diagnosis was rendered particularly obscure by the presence of symptoms of an affection of the brain or other organs sufficient entirely to mask the existence of inflammation in the lungs.

Dr. PARRISH read the

ANNUAL REPORT ON SURGERY, FOR 1850.

The last report on surgery, presented to the College in the year 1847, was occupied with the discussion of the powers, uses, and safety of ether as an anæsthetic agent. At that time, this was the absorbing topic of interest in the medical world, and opinion was vibrating between the utility and safety of this new agent in the practice of surgery, and its dangers and disadvantages.

The question was then considered, *sub judice;* although, from the favorable reports received from all parts of the United States, and from Europe, of its eminent advantages, and from the very few mishaps which had attended its extensive employ-

ment, your reporter ventured to place it among the list of those great discoveries in medicine which, from time to time, have gladdened the world by diminishing the sum of human misery, and conferring upon man an additional power over pain and disease.

Since that period nothing has transpired to diminish our estimate of the importance of this discovery; time and experience, the true touchstones of truth in doubtful cases, have confirmed its value, so that now, anæsthetic agents are very generally acknowledged to be amongst the most esteemed and well established articles of the materia medica. It is true that differences of opinion still exist in regard to the circumstances under which they should be used, and some few surgeons still doubt their extensive applicability to operative surgery, while none, we imagine, will deny their efficacy as the most prompt means of alleviating and annulling pain, which has yet been discovered.

Our report had reference solely to sulphuric ether, (chloroform not having been at that time discovered), and it was therefore for the safety and value of the former that we contended. The discovery of chloroform, which was announced soon afterwards, has changed the aspect of the question; its extraordinary powers, the rapidity and intensity of its action, its freedom from unpleasant odor, the facility with which the system was brought under its influence, without the excitement which preceded the anæsthesia of ether, and the small quantity required to produce the effect, gained for it a wide-spread fame, and, for a time, drew off the public attention from its predecessor.

But the very advantages claimed for chloroform were deemed by some as objections to its general employment. An agent which manifests its effects in a few seconds, which, in a few more, places the patient in an unconscious state, and, if carried a little further, may altogether suspend the nervous power, and then, by an almost insensible gradation, overpower the system beyond recovery, was justly regarded with a degree of fear and distrust by all cautious practitioners. Still chloroform was very extensively used, and at one time almost to the exclusion of ether; and it must be confessed that when administered by skillful hands, and to counteract intense pain, as in the latter stages of labor, the

number of accidents from it have been fewer than we should have been led to anticipate.

In surgery, however, a sufficient number of fatal cases have occurred, directly traceable to its effects, to produce at this period a greater degree of circumspection in its use than was at first manifested, and even to preclude its employment altogether by some very judicious and eminent surgeons. Drs. Warren and Hayward, of Boston, the first experimenters with ether, who led the way to its general introduction into surgical practice, and by their influence and reputation did much to commend it to favorable regard, have both, within the past year, published their views against the employment of chloroform as a substitute, believing it to be unsafe and hazardous. Dr. Warren proposes the chloric ether as possessing advantages over the original article, while Dr. Hayward still adheres to sulphuric ether as the best and safest anæsthetic.

The former gentleman has also published a very instructive paper detailing all the cases of fatal effects from chloroform, which he has been able to collect, amounting to fifteen in number, with a careful analysis of the phenomena occurring in each case, the post-mortem appearances, and other facts of interest. In most of these cases death occurred under the immediate influence of the agent, and was very rapid, within from one to five minutes. The operations for which the chloroform was given were generally slight, and the result altogether unexpected. There seemed, indeed, no way of explaining the fatal issue, except from the sudden and overpowering impression made upon the nervous centres, suspending the functions of life beyond the power of reaction. In six out of ten cases the patient was sitting up, two were lying on the side, and two in the recumbent posture.

In those cases where death occurred while the patient was sitting up, may we not suppose that syncope had something to do with the result? We know that this state is readily induced in some persons from the mental agitation preceding an operation, before any pain has been inflicted or blood shed, and that this is particularly apt to happen in the sitting posture. Syncope being in itself a state of suspended animation, which, if sufficiently prolonged, might terminate in death, it is reasonable to infer that its induction, superadded to the powerful sedative impression of chloroform, might account for the sudden termination of life,

which, in a more resisting state of the nervous system, would not take place. This view would seem to gain confirmation from the fact that, when given during the pangs of labor, or while the nervous system is aroused by violent pain, the chloroform appears to act with less intensity. None of the fatal cases collected by Dr. Warren occurred in the practice of obstetrics, nor have we seen any such cases reported, although the article has been used more freely in this department of practice than in surgery.

The action of opium and other narcotic agents upon the system is known to be materially modified by the degree of pain or of nervous disturbance which it is given to overcome, and quantities are sometimes administered with entire safety and advantage under circumstances of intense pain or spasm, which in a healthy or enfeebled condition of the system would produce alarming symptoms, or might even destroy life.

The influence of idiosyncrasy should also be taken into account in the explanation of these unfortunate results. Some constitutions are peculiarly obnoxious to the influence of anodynes and narcotics, and the smallest quantity of one of these articles will produce effects entirely dissimilar from those manifested in the mass of individuals. The same is true in regard to mercury and other articles of the materia medica in daily use; thus it is that medicines perfectly safe in the ordinary dose act as poisons upon a small number of persons, and instead of being beneficial to them they become injurious and destructive. May not this be the case with anæsthetic agents?

But however we may explain the causes of the deplorable effects which have occasionally followed the use of chloroform, the fact of a number of deaths having occurred under its immediate influence, where all the needful care and skill were exercised in its administration, still confronts us, and cannot but inspire us with a degree of apprehension and terror in the handling of so powerful an agent. If we saw only injurious consequences, as the result of idiosyncrasy, overdoses, &c., as in the cases of opium, mercury, &c., we should not be deterred in availing ourselves of the immense countervailing advantages which follow the general employment of such an article; but where sudden death visits the patient from medicine which we are in the act of administering for his relief, we shrink back

appalled, and however valuable it may be in its general application, we hesitate to trust it.

Such is believed by your reporter to be the feeling of a large body of the profession, in relation to the use of chloroform, although many eminent surgeons and obstetricians, both here and abroad, continue to use it extensively, and have never experienced any ill effects to attend it.

Another class of practitioners combine ether and chloroform, two parts of the former to one of the latter, in order that the suddenly depressing effects of the chloroform may be counteracted by the stimulating properties of the ether. Amongst these is Dr. D. M. Reese, of New York, who introduced this combination into the Bellevue Hospital in that city, where, we are informed, it has been used for several years very extensively in all severe surgical operations, various nervous diseases, and in protracted cases of midwifery, without any untoward results. Dr. W. L. Atlee, of this city, Dr. Gilbert, Professor of Surgery in Pennsylvania College, and Dr. Joseph Parrish, of Burlington, and many others habitually use this combination, and have reported favorably of its effects.

In the Dublin Quarterly Journal for August, 1850, an excellent article has appeared on the use of chloroform, by Dr. Beatty.

This gentleman states that Dr. Gregory, of Edinburgh, ascribes the injurious effects of the chloroform in ordinary use to the presence of certain volatile oily impurities, containing chlorine, and proposes as a test of its purity agitation of the chloroform with sulphuric acid. If impure, the chloroform becomes yellow or brown, from the action of the sulphuric acid on the oils, which it chars and destroys, while pure chloroform gives no color to the acid.

If this observation should prove to be correct, a most important addition has been made to our knowledge on the subject, and one great impediment to the use of chloroform will be removed. It is to be feared, however, that the very energy and intensity of action inherent in this article, which enables it so suddenly to suspend sensation, will still be found to be the grand objection to its employment. Unlike the solid poisons which act more slowly through the stomach, and the dose of which can be accurately graduated, so as to insure their safety, and if too large,

can be counteracted by the proper antidotes, the vapor of chloroform rapidly permeates the breathing surfaces, is carried into the circulation, and produces its effects so suddenly as to give no warning of the impending danger in cases where from any cause its action may be deleterious or destructive.

Reviewing the whole subject, therefore, of the relative value of the several anæsthetic agents, we are inclined to place sulphuric ether at the head of the list, believing it to be as safe and reliable as any other powerful article of the materia medica. Since our last report we have heard of no death, nor even of any serious accident following its use, and are prepared to reaffirm all we said in its favor at that time.

Of chloric ether we have no experience in Philadelphia, but judging from the favorable accounts received of it through Dr. Warren and other experienced surgeons in Boston, we have no reason to doubt its entire safety and efficiency.

The mixture of ether and chloroform, so far as we have been able to collect information on the subject, has not been attended with untoward results, while this combination would appear to be free from most of the objections which lie against chloroform alone.

Chloroform in its concentrated state is chargeable with some fifteen or twenty deaths, most of which would seem to have occurred without the physician having been able, with ordinary care and skill, to prevent the catastrophe. Should, however, the causes of these fatal results be satisfactorily determined, or should any means be discovered to counteract them in future, we shall hail chloroform with new delight as the most perfect means of controlling pain which the genius of man has discovered, but until then we must regard it with a certain degree of distrust and apprehension.

Your reporter will here close his report for 1850, with the remark that numerous engagements, and, perhaps, in part, a spirit of procrastination have prevented him from discussing several matters of prominent interest at this time, amongst which is the question of the propriety of tracheotomy in croup, an operation which, after a temporary suspension, has been revived, and strongly advocated by some very respectable authorities, especially in this city. A highly interesting paper on this subject, by Dr. Pepper, and the report of a discussion grow-

ing out of it, will be found in the last number of our Transactions. The feasibility and justifiableness of the operation of ovariotomy are also exciting much interest, and our fellow-member, Dr. W. L. Atlee, is still pursuing, almost alone, his bold and enterprising career in this department of surgery; how far the actual dangers attendant upon this operation, and the results which have previously attended it, render a resort to it justifiable as a means of ridding females of a distressing but not a rapidly fatal disease, is a question worthy of the most serious inquiry, and one about which there is a wide difference of opinion. The views expressed by your committee, in a former report, were decidedly adverse to the operation; and, although not prepared to bring into view at this time the new facts which have accumulated since that period, we may venture to remark that, so far as the published reports bear record, we see no reason to change or modify them. Nevertheless, we should be slow in calling in question the motives of those who, with the same facts before them, continue to practice the operation, provided that a fair statement of its attendant risks, and of the uncertainty of accomplishing the desired end, is made to the patient beforehand.

Within the past three years, the American Medical Association have annually published reports on the different departments of Medical Science, prepared by committees appointed under its authority. These reports embrace a review of the progress of the several branches in our own country during each year. The ground thus covered is similar to that occupied by this college, except that the greater range which a committee composed of distinguished physicians from different sections of the Union can take, enables them to furnish a more complete and comprehensive report than we can hope to present. How far this action of the Association may supersede the necessity of continuing the committees of the college, is respectfully submitted to your consideration.

Dr. JACKSON read the following account of a

CASE OF PERFORATION OF THE STOMACH.

The Rev. Charles Tucker went to bed the 23d of September, apparently very well, after a day of considerable exertion, both

of body and mind; but he was roused from sleep at four o'clock with severe pain in his bowels, which soon became agonizing. Dr. J. D. Bryant, of Logan Square, who lived convenient, was immediately called. As the patient supposed that he had brought on his disease by eating some unripe grapes the day before, an emetic was administered. No undigested grapes, however, were ejected, and the spasms, with intense pain, continued. Opium with camphor, sinapisms, purgative enemata, were then used.

I having been his family physician, arrived at eight o'clock, and found Dr. Bryant present. The pain and spasms had continued almost unremitting, and there had been frequent vomiting. The skin was now of the natural temperature and dry, the feet had been kept warm, the tongue was clean, pulse natural, no sign of fever, the abdomen not swelled, but hard from spasms, and intensely painful on pressure; the enemata had operated but once, and that but partially.

We gave him a drachm of laudanum, covered his abdomen and back with fresh sinapisms, gave an enema of spirits of turpentine with gruel, then a drachm of chloroform internally, every fifteen minutes till he had taken three doses. After this, he took sulphuric ether frequently, and also spirits of turpentine, a teaspoonful repeated three or four times. The spasms gradually subsided, and he was free from acute pain by ten o'clock.

Dr. Bryant now went to visit other patients, promising, however, to return soon; but as Mr. Tucker was a patient of great importance, I remained with him, and had the pleasure of seeing him relieved by frequent comfortable sleeps. Several terebinthinate enamata were given, but they brought away neither fæces nor wind. Finding him at half-past one not evidently under the influence of opium, and fearing a return of the spasms, particularly as the enemata had not operated, I gave him thirty drops of laudanum with some spirits of turpentine. The pulse was now very little accelerated, the skin not feverish, thirst not troublesome, the abdomen not swelled and not now hard, but merely tender on pressure; I, therefore, left him at two o'clock, knowing that Dr. Bryant would soon be present.

I returned at four o'clock, and found Dr. B. there as he had promised to be. There was now, as we both supposed, a de-

cided threatening of peritonitis. The skin was too warm, cheeks a little flushed, thirst very great, pulse 130, small and soft; there had been no passage from the bowels—the injections remaining with him; the abdomen was very tender on pressure, the breathing rapid—heaving the chest greatly, but not moving the abdomen. We bled him to twenty ounces, and sat him up in bed, with the hope of making him fainty, and of thus effecting a perspiration; but wayward nature refused either to faint or perspire. He said, however, that he was greatly comforted by the bleeding. The respiration was now slower, and moved the abdomen freely, but the pulse became more frequent and even less in volume. The abdomen was now compressible without pain and without much tenderness; there was no swelling of it, no tympanitic sound could be elicited except in the region of the cœcum. Ten grains of calomel were now given him with the intention of following it by a succession of croton-oil pills. The terebinthinate enemata had not come away, and therefore others were given. He was now so comfortable as to sleep frequently, and from every sleep he awoke spontaneously.

At six and a half o'clock he sat on his chair and discharged his several enemata in large quantity, and pressed down very freely at the same time, but he neither fainted nor sweated, though there was hardly any pulse at the wrist. He threw up nothing but turbid fluids and mucus, nor did any feculence or wind come from his bowels. He had now a comfortable sleep, and as Dr. Bryant, who had gone away, was expected soon, I did nothing but give him another enema of turpentine as soon as he awoke. He slept sweetly again and awoke spontaneously, asking only for ice to quench his thirst.

His countenance was now good, his eyes bright; there was no pain; breathing natural; but the pulse was 140, a symptom that embarrassed and distressed me greatly: upon reflecting, however, that some months before he had lost a great quantity of blood from hemorrhoids, and that he had suffered much from the headache which so often attends anemia; that in addition to this waste he had just lost twenty ounces, and had been debilitated by six hours' intense pain and a day's starvation, I caught a gleam of hope that his alarming pulse might be rather natural than morbid and fatal.

Dr. Bryant returned at nine and a half o'clock, when the pa-

tient had been for half an hour, as I thought, in a comfortable sleep. It was now determined to give him a pill of croton oil, but it was found difficult to awake him. He swallowed it, however, when dissolved, and then asked for ice, but it was evident that he was overwhelmed with stupor. The sleep however was easy, his breathing natural, his eyelids closed tight, the eyes bright, the pupil natural, and acting well on the moving of light to or from them.

My impression now was, that the operation of the opium had been somehow preternaturally postponed, and that he would soon sleep off the effects of so small a quantity, some of which he had no doubt thrown off by his morning emesis. About this time, however, the cold douche was plentifully used on his head. Till twelve o'clock, he swallowed his doses of croton oil; but finding every symptom getting worse, we sought further counsel, and Dr. Fox was called. He arrived at one o'clock, and having investigated the case with great care, he determined that the patient was dying of some unascertained disease, and that opium had no part in the present stupor. The Dr., however, introduced a tube two feet up the bowels, and turpentine enemata were injected, but neither feculence nor wind came away.

His breathing was slow and short, not stertorous; his skin warm and without any perspiration; pulse very small, sometimes too frequent to be counted, and of course above one hundred and sixty; eyelids closed tight; pupils natural, and contracting at the approach of the candle; cornea bright as natural; face very pale; lips natural. In this state he continued till seven o'clock, and then, without the least struggle or convulsive motion, he ceased to breath. The whole body was very warm to the last, and without any sensible perspiration.

We opened the abdomen fifty-six hours after death in the presence of Dr. Samuel Tucker and the Rev. Mr. Gillet. The general phasis of the bowels and of the incised muscles was highly anæmatous. In the front of the stomach near the pylorus, there had been a circular ulcer, at some former time, about an inch in diameter, through all the coats except the peritoneal. The whole circumference of this ulcer had been beautifully cicatrized, leaving the peritoneal coat unhurt. But through this coat there was now a fresh ulcer, about half an inch in diameter, and perfectly circular. The edges were plainly fresh, but there was no in-

flammation around it. It looked like a circular hole, made in a sound membrane with a cutting instrument. In all other respects the stomach was everywhere perfectly healthy, except its anæmia. In the cavity of the abdomen, there were about two quarts of a turbid fluid which smelled strongly of turpentine.

The intestines were traced from end to end, but no obstruction was found among the bowels. There were a few small patches of slight peritoneal inflammation. The liver was sound, but of a yellow hue. The gall-bladder was filled with green bile. There was a very little loosely clotted blood in the right auricle and ventricle, but nothing like a fibrinous concretion, though the heart had beat for the last twelve hours with almost inconceivable weakness, as ascertained both by the pulse and by auscultation.

The only question of interest is this—what was the cause of his stupor? The patient took seven grains of opium in the morning between five and eight o'clock; during which time he puked frequently and freely. The medicine was combined with camphor in large soft pills, and hence their solution in the stomach could not have been deferred. That a portion of them was thrown up is doubly probable, as there was frequent free vomiting, and as the spasms were not mitigated. At eight o'clock I gave him a drachm of laudanum, fresh from the shop, and therefore doubtless of the proper strength. At one and a half o'clock I gave him thirty drops, after which he took no more.

If all the above had remained in his stomach it would have been a small portion in so long a space of time and in such severe spasms. From ten to six o'clock he slept frequently, and awoke spontaneously; this must have worn off much of the narcotism.

I have frequently seen patients who had taken too much opium, but the effects were always evident in two or three hours, and whenever the patient awoke spontaneously I felt no further concern. It is certain that sleepiness increased upon our patient from the time he was bled: whether the final stupor was some anomalous effect of losing blood, it might be well to consider. I have known patients in the advanced stage of remittent fever fall into fatal lethargy soon after losing blood from the bowels or nose; and one patient who was improperly bled too late in the disease, fell immediately into a fatal stupor

that continued twelve hours. But it may be said, these were cases of fever implicating a state of the system which did not obtain in the present case. What difference there may be in the two states of the system in relation to the operation of opium cannot be ascertained with satisfaction; but we may say that great losses of blood in health or in common inflammation do not produce this stupor. Yet it has been argued, that as animals bled to death do not lose any portion of their cerebral blood, therefore there must be a relative congestion. I remember a woman about the change of life who suffered frequent menorrhagia for some months, until she was very anæmatous; this patient suddenly lost a larger quantity of blood than usual, and quickly fell into a fatal stupor without any medicine whatever. I could not rouse her by any means; even the actual cautery to the neck and over the longitudinal sinus did not move her.

Mr. Tucker's case was not that of a healthy man. He had been for some months very anæmatous, and to this must be added the depression of vitality by an effusion of irritating matters into the peritoneal cavity.

Dr. CONDIE considered the case just related by Dr. Jackson a highly interesting one. He did not think the doctor need have given himself any trouble to prove that the death of the patient was not accelerated, or that the symptoms which preceded it were not produced by the opium administered. He believed that the remedy given, perhaps, even in larger doses than it was in this case, would receive the approval of every well-instructed physician.

Dr. COATES believed that Dr. Jackson had no cause to blame himself for the use of opium. Dr. C. inquired as to the more recent trials of that practice for perforations of the alimentary canal. As far as he was informed, it appeared the most promising or rather the least unpromising treatment in these cases, by checking or suspending the peristaltic motions of the parts, and permitting adhesion.

In illustration of this, Dr. Coates mentioned the tendency of late observations on this point, as published in the journals, the familiar dependence on adhesion of the peritoneum, with immo-

bility of the part, after operations for hernia, and the inclination for what had been called "a bolder abdominal surgery," as evinced by the now numerous operations for extirpation of the ovaria.

Dr. Coates's successful case of glass-wound of the abdomen, had been accompanied by absolute costiveness for upwards of five days; the patient taking a cough mixture containing a little laudanum; although Dr. Coates had at the time attributed the extreme costiveness to the depression of the vital powers of the protruded intestines from their becoming deeply chilled during their exposure to the air.

Dr. Wood stated that he had seen, just before his late visit to Europe, a case of typhoid fever in a medical gentleman. During convalescence the patient was suddenly seized with symptoms of violent peritonitis in the neighborhood of the ileo-cœcal valve. He was immediately placed under the influence of morphia, with a blister over the seat of inflammation, and finally recovered. The diagnosis was, that a small perforation had occurred in one of the intestines, succeeded by inflammation and effusion of coagulable lymph. The opiate, by preventing any movement of the bowels—by putting them, as it were, in splints—prevented the adhesive process from being disturbed, and permitted the permanent closure of the perforation.

Dr. Pepper has known cases of sudden perforation of the stomach to occur in anæmic girls. We know, also, that perforation of the cornea may occasionally occur in very anæmic subjects. It is not probable, however, that the extent of anæmia in the gentleman whose case has been related by Dr. Jackson, was sufficient to account for the perforation which took place. Dr. P. has known patients convalescent from typhoid fever to complain of sudden severe pain in the region of the ileo-cœcal valve, attended with coldness of the surface and great prostration, and has put such patients under the influence of large doses of morphia from the fear that perforation of the bowels had taken place followed by peritoneal inflammation, but learning afterwards that they had partaken of improper food, he had reason to believe that the symptoms were those of severe colic, and that his fears had been unfounded.

Dr. CONDIE remarked that we have reason for believing that in the cases of perforation of the bowels the administration of opium is the proper treatment, and the one by which the patient is afforded the greatest chance for recovery. We know that in most cases of ruptured uterus that have recovered, opium was administered freely—the exhibition of opium is now, indeed, the received treatment in such cases. The case of the late Dr. McClellan affords an instance of a sudden occurrence of perforation of the stomach terminating in death in a few hours, in a person by whom there had been presented, previously, no indication of any serious gastric disease.

Dr. ASHMEAD referred to the case of an athletic butcher, apparently in perfect health, who left home to purchase cattle; on getting off his horse at the door of a farm-house he was suddenly seized with pain and other symptoms of severe peritonitis, and died in a few hours; upon an examination of his body, an old ulcer was discovered in his stomach, which had suddenly perforated the coats of that viscus, although its presence had not been suspected. A patient, convalescent from typhoid fever, when well enough to go out, partook of apples. He was immediately afterwards seized with symptoms of peritonitis, opium was immediately prescribed, but without any good effect; the patient died in twenty-four hours from a small perforation of the bowels. The late Dr. Harris, of Camden, died of acute peritonitis. On examining the body a small ulcer was detected in the stomach, but no perforation. The presence of the ulcer was unsuspected during the patient's lifetime. He was large, robust, and, up to a short period before his death, an apparently healthy man.

It is a well-established, though curious fact, that ulcers do occur in the stomach and intestines, and continue for a length of time in persons apparently in the enjoyment of perfect health, and, when least expected, give rise suddenly to perforation, followed by peritoneal inflammation and death.

Dr. ATLEE suggested, whether the peculiar symptoms which marked the case related by Dr. Jackson, and which so strongly resembled those from narcotism, were not, in fact, produced by the opium administered. It is not probable that the quantity given in this case would have caused the same amount of nar-

cotism, had it not, or at least a considerable portion of it, escaped through the perforation of the stomach into the cavity of the peritoneum. Now, we know, from numerous experiments that have been performed on living animals, that when poisons are introduced into the serous cavities they produce a much more powerful impression than when taken into the stomach; absorption from these cavities has been shown to occur much more rapidly than from the stomach. We can scarcely suppose that some portions of the opium that was given in Dr. Jackson's case did not pass from the stomach through the perforation into the peritoneal cavity, and from the fact of such a passage having taken place, we may account for the sudden and unexpected occurrence of the stupor which preceded death.

Dr. COATES confirmed the opinion of Dr. Atlee, by the observation that, in his experiments on absorption, the absorption of foreign matters from the cavity of the abdomen, was found very many times more rapid and abundant than from the cavity of the alimentary canal, or even the cellular substance; and that, in cases where the action of medicines was presumed to depend in any degree on absorption, the rapidity of the ingress of the active matter, compared to that of its escape by the kidneys, was a nearly approximative measure of its action.

Dr. PARRISH stated that he had seen three cases of death from perforation of the stomach by an ulcer.

One was that of a merchant in this city, passed middle age, who had been for some years a dyspeptic. One evening he came home late from his store, and partook, before going to bed, of cold veal and vinegar. He was seized in the night with violent pain in the abdomen, attended with rapid and alarming prostration, and died in great suffering on the following day. A post-mortem examination revealed extensive peritonitis, a portion of the contents of the stomach having passed out into the cavity of the peritoneum, through an ulcerated opening in that organ.

A second case was that of a young lady who had been suffering for some time from hysterical symptoms and indigestion, brought on, it was thought, from close confinement to sewing, which she pursued for a living. While walking along Arch

street, she was suddenly seized with violent pain in the abdomen with distressing retching. When I saw her, a few minutes from the first attack, she was cold, with shrunken countenance, feeble pulse, great thirst, and restlessness, and screaming with pain. So violent were the symptoms, that it was impossible to remove her to her home, and she died in great agony in less than eight hours. A post-mortem examination exhibited a penetrating ulcer of the stomach as in the other case.

A third case was that of a young woman who stood in a dry-goods store as saleswoman. She also had been hysterical and dyspeptic, and had for a considerable time been taking pretty freely of Thomsonian Medicines; immediately after taking a dose of "number six," she was seized with violent pain, which continued unabated, and attended with great prostration, shrunken countenance, extreme jactitation and restlessness until her death, which occurred in about twelve hours. A perforation of the stomach was found in this case, and the specimen is now in the cabinet of the College.

There was a feature in all these cases which impressed me painfully, and which does not appear to have been so marked in the case narrated by Dr. Jackson—it was the intense and unmitigated agony which attended them from first to last, and which rendered all medical means unavailing even in affording temporary relief. The powers of ether and chloroform were not at that time known, or they might have accomplished what anodynes given by the mouth or rectum failed to do.

A HUMAN HORN.

Dr. HAYS presented to the pathological cabinet a horn-like substance, upwards of four inches long, and of a curved form, which had been handed to him by a gentleman, who could give no further history of it than that he had received it from another, as a horny excrescence taken from the knee of a negro man. If it be such, and Dr. Hays saw nothing improbable in the statement, it must be viewed as a curious, and very beautiful, specimen of *ichthyosis cornea*. It, certainly, the doctor remarked, resembled very closely the delineations he has seen of that disease.

ON THE STRUCTURE OF THE MUCOUS MEMBRANE OF THE HUMAN STOMACH.

(Read by Dr. Neill.)

It is with some hesitation that we present before this College a paper containing even an intimation that anything new connected with so well-studied a structure as that of the human stomach is yet to be observed or described.

Neither are we yet prepared to make the assertion that more recent and protracted examinations have brought to light any specific elementary formation not noticed before, in some disconnected way, and allied with much that is irrelevant and imaginary.

By the aid of microscopic and minute injections, we have been led to the conviction that, as a whole, the internal surface of the stomach has not been fully represented in any description or diagram. Notwithstanding all that older anatomists have written, shall we not be sustained in the statement that their views concerning this elaborate and complicated structure are confused and contradictory? And although modern authorities are more uniform, may not their uniformity be the result of the adoption of a common error?

We should state that it is not the epithelial, but the true surface of the mucous membrane of the stomach to which we wish to call attention, and the facts we shall present can be observed by any one in the preparations upon the table.

The surface of the mucous membrane presents different appearances in different portions of the stomach; this fact not having been sufficiently appreciated by observers, we consider as one of the sources of error in the ordinary descriptions of this organ. By far the larger portion exhibits various modifications of the honeycomb structure, the cells are large and polygonal in some parts, in others they are smaller, deeper, and rounder; the ridges between these cells are formed of one or more convoluted capillaries, and this arrangement of capillaries is particularly evident in the rugæ. (See Fig. I.) The walls of these cells or pockets are formed of a network of capillaries, which subdivides each cell into smaller ones; these cells are what are ordinarily called the orifices of gastric glands, and the subdivision in the bottom of each cell corresponds with the

Fig. I.

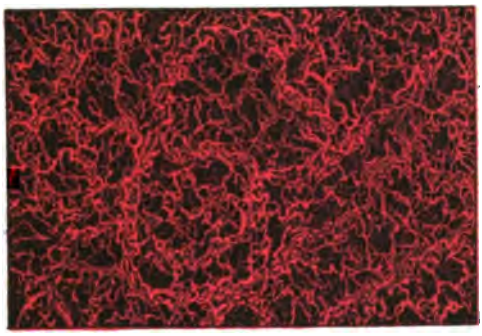


Fig. II.

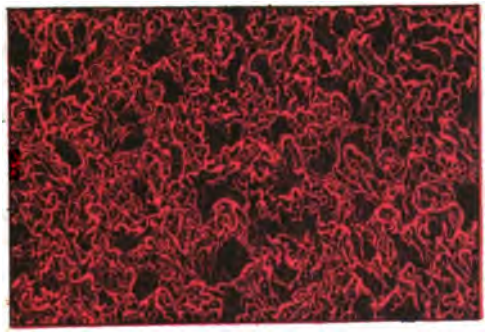


Fig. III.

described orifices of tubuli. In the antrum pylori the structure is modified, the ridges between the cells become larger, more elevated (See Fig. II.), and as we approach the pyloric orifice, *conical villi* make their appearance; these villi are more numerous and larger towards the pyloric valve, so that fewer of the angular or polygonal cells are visible in their interstices; they are not so large as the villi of the small intestine, but in other respects their external appearances are precisely similar. (See Fig. III.) When well injected they seem to be composed of capillaries, closely united by a basement membrane, and forming a pyramidal projection.

There may be said to be three different appearances presented by the microscopic examination of the injected capillaries of the mucous membrane of the stomach when deprived of its epithelium: *First.* The convexity of a large ruga will have a comparatively smooth and even appearance formed by convoluted and intertwining capillaries. *Second.* Any other portion, excepting the antrum, will exhibit cells or alveoli of different sizes and shapes, separated by ridges of various thicknesses, and these ridges are composed of capillaries arranged in the same manner as in the rugæ. *Third.* In the antrum pylori there are *conical villi*, and cells exist in the interstices, and at their bases.

That the main point which we wish to prove may be understood in a few words, we would simply state that we consider the capillaries arranged in the form of "ridges, cells, and *villi*." The question may now arise whether this description in any manner deviates from those ordinarily given in the standard works of the day? We consider that it does, particularly with reference to the villi, the existence of which, in the stomach, we wish fully to establish by description and demonstration. It might be asked whether the term *villous* has not constantly been used with reference to the mucous membrane of the stomach? Unquestionably it has, though in a vague and loose way, as indicating a smooth velvety surface; but not as implying a vascular, papillary projection, to which the term *villous* is applied in the intestine.

To corroborate the statement, that it is generally believed that villi do not exist in the stomach, we have only to refer to recent anatomical and physiological writers on the subject.

Kirkes and Paget* teach us not only that there are no villi in a healthy stomach, but that the cellular and honeycomb appearance characterizes the whole of its mucous membrane, and that the appearance is *uniform*. Neither Wilson nor Todd and Bowman speak of villi in the stomach. Carpenter† refers to "pointed processes that have been *mistaken by some anatomists* for villi."

Hassall has neither drawing nor description of gastric villi in his Microscopic Anatomy.

Horner‡ says "that none exist in the stomach or colon."

Quain and Sharpey§ state "that these pointed processes may be compared to rudimentary villi, the perfect form of which only exists in the small intestine."

Harrison,‖ of the *Dublin Dissector*, denies the existence of true villi.

* "Presents a peculiar honeycomb appearance, produced by shallow polygonal depressions or cells. They are separated by highly elevated ridges, which sometimes, especially in *morbid states* of the stomach, bear minute narrow vascular processes, *that look like villi*, and have given rise to the *erroneous* supposition that the stomach has absorbing villi like those of the intestine. In the bottom of the cells are minute openings, &c., which are the orifices of perpendicular glands."—p. 165.

† "These pits are more or less circular in form, and are separated from one another by partition—like elevations of the membrane which vary in depth; and sometimes even by pointed processes *that have been mistaken by some anatomists for villi.*"—p. 659.

‡ "The mucous coat of the alimentary canal in a healthy state, and successfully injected, appears to consist almost entirely of a cribriform intertexture of veins." "In the whole length of the intestine there is, however, every variety of shape of villi, from oblong, curved, and serpentine ridges, to the laterally flattened cone standing on its base, &c. Conformably to this definition of villi, none exist either in the stomach or colon."—Vol. ii. p. 54.

§ "It is seen to be marked throughout, but more plainly towards the pyloric extremity, with little depressions or cells, namely, alveoli, which have a polygonal form." "The margins of these alveoli are elevated into pointed processes, which may be compared to *rudimentary villi;* the perfect form of these appendages only existing in the small intestine, and making their appearance in the duodenum."—Part III. p. 1025.

‖ "Numerous follicular papillæ, but not true villi, project, and leave between them small depressions or pits studded with minute holes; these pits are more or less circular, and are bounded and separated by the follicular elevations; they are more distinct towards the pyloric portion of the stomach; four or five foramina are seen in each: these are the orifices of the small glands and ducts that elaborate the gastric fluid, the mucous being probably furnished by the follicles."—Vol. i. p. 244.

Hodgkin* seems to be ignorant of this structure in the stomach.

Now these authorities are sufficiently numerous and authoritative to convince us that although the term *villous* has been used with reference to the stomach, yet the authors just quoted do not believe that *villi* exist in the stomach.

On the contrary, a number of other writers say that villi *do exist* in the stomach, and give descriptions of them, though none have made drawings of them but Berres,† whose magnificent work has fallen into my hands since the artist has given the accompanying representations. With the exception of Berres, we believe no one has had the knowledge of this structure, although Bèclard‡ says "the villosities are nowhere more numerous than in the pyloric half of the stomach and small intestine;" and again, in a succeeding paragraph, says, "they are shorter and *less numerous in the stomach* and large intestine," and in another denies the vascularity of them. If Bèclard's injections could

* "In fact, the surface of the mucous membrane of the stomach is generally described as villous: and even Billard appears to agree with this description of it. I have, at least, a doubt respecting the accuracy of this statement. To me, the surface of the stomach, when viewed under the circumstances which I have mentioned, appears to the naked eye by no means perfectly smooth, but of an indeterminate character, very difficult to describe." "Whilst in the *serous* membranes, the assistance of a powerful microscope enables us to distinguish delicate fibres intimately interlaced; when the *mucous* membrane of the stomach is thus examined, *I can only observe an amorphous semi-transparent* mass, in which no structural texture can be distinguished."—Lect. xix. p. 270.

† Anat. Microsc. Corp. Humani. Auct. Dr. Josepho Berres, Prof., &c. Vienna, 1837.

‡ "The villosities whose existence is very general, but which are nowhere more numerous, larger, or more apparent than in the pyloric half of the stomach, and in the small intestines, and especially in the commencement of that intestine, are eminences still finer than the papillæ."

"These villosities may with propriety be called the *radicals* of animals; are small foliaceous prolongations of the internal membrane," &c. "Were first described by Fallopius and Azelli, and have been figured by Helvetius, Lieberkuhn, Hedwig, Rudolphi, Meckel, Buerger, and others, especially in the small intestine, being shorter and less numerous in the stomach and large intestines."

"Those of the pyloric half of the stomach and duodenum are broader than long, and constitute a small lamina." "There is not perceived the vascular texture which has been described as belonging to them."—*Elém Gén. Anat.*, Béclard, translated by Knox, 1830.

not exhibit the vascularity of these villi, it is hardly probable that he could have any accurate idea of the structure, for it is only by successfully executed injections that the true form of the villi can be determined. An opinion founded on no better data can hardly be more than an hypothesis, or an inference from the nature of the surface in other portions of the alimentary canal.

Such also may be considered the value of Bichat's* statement upon this point. He *reasons* that they exist there, because they do in other parts; his generalizations lead him to assert the existence of structures we fear he had never seen. He says "analogy indicates it," but "it is difficult to decide the question by ocular demonstration."

Billard, in his work on "Mucous Membranes," speaks of the stomach as possessing villi, and says, "they exist *generally* over its surface" (with which we cannot agree), although he describes them as "more numerous towards the pylorus," and that "in the healthy stomach the naked eye perceives them but indistinctly."

Huschke† seems to have appreciated the labors of Berres on

* The papilla of this system cannot be called in question at its origin, where it dips into the cavities, in the commencement even of these cavities, as upon the tongue, the palate, the internal part of the alæ of the nose, upon the glans penis, in the fossa navicularis, within the lips, &c. Inspection is sufficient to demonstrate them there. But it is asked if the papilla exist also in the deep-seated parts of this system. Analogy indicates it, since the sensibility is as great there as at their origin, though with varieties that we shall point out; but inspection proves it in a manner not less certain. I think the villi with which we everywhere see them covered are nothing but these papillæ. This manner of regarding them by explaining their existence, generally observed upon all the mucous surfaces, appears to me to be much more conformable to the plan of nature than to suppose them in each place with different and often opposite functions. Besides, it is difficult to decide the question by ocular observation. The delicacy of these elongations conceals their structure, even from our microscopical instruments—agents from which anatomy and physiology do not appear to me to have derived much assistance, because when we see obscurely, each sees in his own way and according to his own wishes. It is then the observation of vital properties that should especially guide us; now it is evident, to judge by them, that the villi have the nature I have attributed to them."—*Bichat, Hayward's Translation*, 1822.

† Mais les cloisons interposées entre les glandes tubuleuses méritent de fixer l'attention. Sur les dentelures qui servent de limite si tranchée entre l'épithélium de l'œsophage et le commencement de l'estomac, il y a, sui-

this point, and admits that the pyloric portion contains villi: and Krause also speaks of "villous folds."

We thus see that even modern writers do not agree; and if this diversity of opinion exists at the present time amid the advantages which we possess, we should not be surprised at the conflicting testimony of those of older times.

Some expressions in Haller* might lead us to suppose that he had very clear evidence of the existence of villi, which he describes as "projecting into the cavity of the stomach;" he speaks also of "the inhaling veins opening in the pendulous villi."

Ruysch† gives a drawing from one of his minute injections,

vant Berres, des papilles longues de 1-17 à 1-18 de ligne, sur 1-64 d'épaisseur, dans chacune desquelles pénètre une anse vasculaire de 1-139 de ligne. Ces papilles servent peut être à procurer une plus grande sensibilité aux pointes où elles existent. Dans le reste de l'estomac, les parois intermédiaires entre les orifices des glandes ne s'élèvent pas d'une manière notable, et l'estomac n'a point, par conséquent, des villosités proprement dites, quoique sa membrane muqueuse fasse le passage, par son aspect tomenteux à celles qu'on nomme villeuses. Mais les choses changent lorsqu'on approche du pylore. Ici, non seulement le membrane muqueuse devient plus épaisse, mais encore sa surface acquiert rapidement une tout autre apparence, qui mène à la formation des villosités de duodénum. Voici comment j'ai trouvé la métamorphose. Les orifices des glandes tubuleuses s'élargissent rapidement, et leurs intervalles commencent à se soulerer, deviennent par là mobiles et flottants, et acquièrent des bords en crête de coq, c'est-à-dire pourvus de pétites points à trois dents. Pendant que ces bords s'élèvent ainsi en manière de plis ou de lames que Krause nomme *plicæ villosæ*, et auxquels il assigne 1-28 à 1-19 de ligne de hauteur, sur 1-56 à 1-28 de large, le fond des glandules tubuleuses se rapproche aussi davantage de la surface, et leur cavité tout entière est alors devenue l'intervalle entre les villosités lamelleuses. D'abord leurs parois intermédiaires sont encore tubuleuses; mais quand l'ouverture des glandes s'agrandit, elles ne tardent pas à se recourber irrégulièrement sous des formes diverses, en zig-zag, en rond, en spirale, continuent d'abord de tenir les unes aux autres par des saillies plus ou moins prononcées, et finissent par perdre entièrement ces moyens d'union; de sorte qu'alors les glandules tubuleuses se continuent les unes avec les autres à la surface, et ressemblent plus à un labyrinthe qu'à un rayon de miel ou à un réseau.—*Encyclop. Anat. Traité de Splanchnologie*, par E. Huschke. Paris, 1845.

* Haller's Physiology, vol. ii. p. 161. Lond. 1754.

† "Quando enim ventriculi arterias cera replevi rubrâ: posteaque in liquore idoneo ita prius præparatas partes hasce macero, experior tum superficiem interiorem ventriculi et intestini jejuni tunicâ quasa quadam

which exhibits the surface of the stomach as consisting of regularly-formed pockets or cells. He speaks also of villi, but nevertheless confesses that his view of this arrangement was only particularly satisfactory in sheep. If he had satisfactorily injected the villi of the stomach, is it not probable that he would have given us a drawing of this structure in his work?

Fordyce says "that as far as I can judge, it seems to be nothing but cellular membrane. When the surface was moderately moist, there seemed to be a number of thin fine membranes crossing each other, so as to form a number of angular cells."

Hewson states that the whole surface of the intestinal tube is covered with villosities, but admits that in the large intestine these bodies are so short, that the surface appears smooth to the naked eye, while no true villi are detected by the microscope; only the partitions between the cells resemble villi in their structure. In the stomach a nearly identical appearance is found. "At the upper part of this organ, the villous coat appears in a microscope like a honeycomb, or like the second stomach of ruminating animals in miniature; that is, full of small cells, which have thin membranous partitions. Towards the pylorus these partitions are lengthened, so as to approach to the shape of the villi in the jejunum."*

That these opinions should have but little weight with writers and teachers at the present day, and that they should be quoted merely as elucidating the history or the literature of the subject,

papillosa vestitam esse. Fateri tamen debeo, haud ita evidenter quidem in stomacho humano has papillas apparere, ut quidem in ovillo: quemadmodum hâc in figurâ expressi. Inde itaque et tanto facilius inducimur credere, et in homine ita obtinere, quum obscurius quidem similitudo accedens in homine observetur."—*Ruysch, Dec. Tert.*, pp. 34–35, 1737.

"Voco autem hanc intestinorum tunicam villo-papillosam, quia animadverti villosam istam superficiem penitus simul esse papillosam, quemadmodum se habent interiora nostrarum Genarum in suo integumento, ut et labia oris, œsophagus, ventriculus, omniaque intestina, quum sit in his omnibus ejusdem apparatus continuata productio. Verum quidem est, in unoquoque non æque clarum id apparere; quum in Labiis genis internis, et in intestinis maltorum bominum tunica hæc papillas hasce nimis manifestas non possideat, attamen in aliis satis conspicua datur."—*Ruysch, Dec. Secunda*, pp. 25–26.

* Dr. Sprott Boyd's article on the Structure of the Mucous Membrane of the Stomach.—*Edin. Med. and Surg. Journal*, 1836.

ought not to surprise us, when we learn that their descriptions were generally based upon observations made with the naked eye, or with instruments in which the observers had but little confidence; for both Fordyce and Bichat, although they used microscopes, expressed themselves as deriving no advantage from them. Neither are we disappointed at the want of accuracy in their descriptions, when we reflect that their comparisons were derived in a great measure from the inspection of inferior animals, and that the meaning attached to such terms as cells, alveoli, crypts, pockets, lacuna, glands, villi, papillæ, &c., is conventional, and varies with the different periods at which the authors above referred to have made public the results of their observations.

We ought next to inquire what is taught by the principal physiological writers of the day upon this subject, and examine the evidence upon which they base their theories, and see how far the structure they demonstrate corresponds with what we may conceive to exist.

The investigations most frequently referred to are those of Sir E. Home and Dr. Sprott Boyd, although the diagrams of Ruysch, Horner, Todd and Bowman, and Berres are far more in accordance with nature. We refer now merely to the mucous membrane, and not to its epithelial investment, which has received so much attention from Wassman, Henle, Wagner, Hassall, and others.

Sir E. Home says: "The structure upon the upper arch of the stomach, which, when magnified by a common lens had the appearance of glands, is shown by Mr. Bauer to be made up of cells in the form of a honeycomb; this honeycomb structure consists of cells of the greatest depth in this particular situation, but over the whole surface of the cardiac portion of the stomach the appearance is so faint as to require a great magnifying power to render it visible. In the pyloric portion the cells in general have the same appearance, but there are small clusters, the sides of which rise above the surface, giving the appearance of foliated membranes."

And Dr. Sprott Boyd agrees with him, for he says "the appearance of those cells, throughout the cardiac portion of the stomach, corresponds to the representation given of them by Sir E. Home. When the mucous membrane is extended, they ap-

pear tolerably regular both in form and size, varying from the one two-hundredth to one three-hundredth and fiftieth of an inch in diameter, being smaller in the young man than in the adult subject. Towards the pylorus, the mucous membrane, which is thin throughout the great cul-de-sac of the stomach, becomes considerably thicker, the dimensions of the cells are increased, and an appearance somewhat resembling that described by Sir E. Home is perceptible. He mentions the patches distinguished by the foliated membranes, as existing particularly towards the pylorus. They may be found, however, in the cardiac portion of the stomach likewise; perhaps not actually at the great extremity; but certainly opposite the termination of the œsophagus. In the engraving given by Home of these patches, the wall of each cell is represented as rising above the general surface of the stomach, and being cleft into a number, ten or a dozen, of rounded segments, which form a complete fringe about the mouth of the cell. These projections of the mucous membrane are, so far as I have been able to observe, much less numerous. There is no regular fringe, but here and there a prolongation of membrane, resembling an ordinary villus of the intestine, rises from a partition between two cells. These bodies from their small size are not easily distinguished; they give to the surface a more flocculent and velvety appearance than is presented by other parts of the stomach. The cells near the pylorus are in some cases about one one-hundredth of an inch in diameter, and on examining them on a dark ground, and with the aid of a reflector and a magnifier of a quarter of an inch focus, their interior is pretty distinctly seen presenting an appearance similar to what I have presently to describe as existing in the stomach of the pig, where it is more clearly visible and more easily examined. The floor of each cell appears perforated by numerous circular openings, as if a number of tubes opened on it; and on making a vertical section of the mucous membrane, it is seen to be composed of striæ or fibres running perpendicularly from the free surface of the membrane to the cellular coat beneath."

The diagram of Dr. Boyd is the one which is usually copied into the text books of the day. Had it been made from an injected preparation, we think the nature of "cells and the circular openings perforating their floor" would have been more

distinctly demonstrated. The circular openings which he considers to be the orifices of *tubule*, which he describes partly from observation, and partly from analogy in the pig's stomach, we consider to be simply the sub-divisions of the cells into smaller and deeper ones by the arrangement of the blood-vessels. We have no disposition to make any innovations upon the terms "tubuli," "gastric tubes," "pyloric tubes," &c., but merely wish to show that their parietes are formed of vessels, and that they are elongated cells or alveoli.

It will be a question of great interest to determine the uses of the *Gastric Villi*. Their form and structure, and their resemblance to the intestinal villi would naturally lead us to associate them with the function of absorption, although some, perhaps, who still consider the intestinal villi to be tactile, would wish to ascribe the same character to those of the stomach. We would not imply by the application of this term *villi* that their uses are precisely similar to the villi of the intestine, that is, that they participate in the chyliferous absorption, or that their lymphatics should be called lacteals; on the contrary, we would believe that the fluid which they absorb is very different from that which has to be subjected to the influence of the bile and pancreatic juice previously to its removal from the intestine; for we have neither mesentery attached to the stomach, nor mesenteric glands for lacteals to pass through, did we suppose them originating in the villi of the pylorus. But is there no other absorption from the stomach than that of watery fluids by endosmotic action directly through the parietes of the blood-vessels? May not these villi be the special apparatus for the absorption of the solution of the albuminose compounds? Is there no nutrition except through the villi of the intestine?

EXPLANATION OF THE PLATE.

Fig. 1 exhibits the gastric cells and capillary ridges.

Fig. 2 exhibits the cells becoming deeper and the ridges becoming more elevated and pointed.

Fig. 3 exhibits the *Gastric Villi*, together with gastric cells.

Proposition (15) for Fellowship was presented.

Stated meeting, December 3, 1850.

Dr. WOOD, President, in the chair.

Present, twenty-two members.

Dr. E. R. MAYER was duly admitted a Fellow of the College.

The Committee of Publication reported that they had issued the third number, vol. iii. of the Summary of Transactions.

REMARKS ON HÆMATOSIS.

Dr. C. D. MEIGS remarked that, in the absence of any more important communication, he would take this opportunity to present a few hints on the subject of hæmatosis. There are certainly few subjects in physiology better calculated to excite the attention of the practicing physician. All admit that the condition of the blood exercises a most sovereign influence on the state of every organ it traverses, and upon the system generally. That the condition of the blood itself is constantly undergoing important changes. Every thought, every action, the exercise of every function of the living organism is, each moment of our lives, causing some change to take place in the blood. Man cannot act or think, excepting through the instrumentality of the solids, and consequently, by the destruction of a portion of the blood. The blood has been denominated by one writer "fluid flesh," and by another, the "fluid body," phrases by no means hypothetical, for the solids are nothing more or less than solidified blood; out of the blood all are formed, and upon the blood all depend for their stimulus to vital activity. Pure blood is not only essential to the due organization of every portion of the body, but to the regular and prompt performance of the functions of all its organs. Of the causes which produce disease, many possess the power to modify the condition of the blood: some act upon the hæmostatic power, increasing or diminishing its force. The blood possesses a certain crasis—to adapt it for the physiological ends it is to accomplish, a certain

relationship must exist between its several component parts—water, discs, albumen, and fibrine. In 1000 parts of healthy blood there should be contained—790 of aqueous elements, 127 of discs, 80 of albumen, and three of fibrine. A different composition, a change in the proportion of either element, renders the blood unadapted to the performance of its proper functions in the animal economy. An excess of albumen, fibrine, or discs creates a plethoric condition of the system; a deficiency, anæmia. Excessive exercises, carried to the length of producing fatigue, exhausts the solids of our organs, and consequently uses up a large portion of the fibrine and discs of the blood more rapidly than these elements are supplied by hæmatosis; anæmia is the result. The blood-vessels are still distended, but the blood which fills them contains an excess of the aqueous elements. Fatigue, whether of body or mind, long-continued muscular exertion, an impoverished diet, profluvia, all use up the blood, and deprive it of its healthy crasis. The composition of the blood would be always the same, provided the hæmatosic power was always of its normal grade—neither augmented nor impaired. Now, what are the causes which modify the blood-making power? what are the immediate causes of anæmia and of plethora? why is it that an excess or diminution of certain of the constituents of the blood produces disease? what is the hæmatosic power? where does it reside? what are the organs by which it is exercised? how can we modify it? The blood is the matter destined to build up and repair the solids—the material out of which all the organs of the body are formed, and by which the constant waste they are undergoing is supplied. It is more than this, it is an oxygenating material, destined to stimulate into action the vitality of the several organs. In all classes of animals an apparatus exists for the ventilation of the blood by the admission to it of the atmospheric air, from which it derives its oxygen. Nothing can live out of the presence of oxygen—it is oxygen which creates life. The blood is an oxygeniferous agent. The ancients, when they named the blood-vessels arteries, that is air-tubes, were not far wrong. All these vessels carry oxygen to every portion of the living organization, that, by its presence and contact, in each portion, the manifestation of life should be maintained. Any change which takes place in the hæmatosic power causes a change in

the crasis of the blood; a due amount of nutriment and of oxygen ceases to be supplied to each part of the system, and the functions of life become in consequence defective or irregular. It is the nervous mass which especially demands, for the due maintenance of its vitality, the presence of oxygen, and consequently, of the oxygeniferous material, the blood, in its entire purity. The entire nervous mass, and every separate molecule of which it is composed, is endowed with the principle of vitality; the presence of these molecules is essential to the life of every portion of the system, and the moment they are touched by oxygen they exhibit the manifestation of vitality. Changes in the condition of the hæmatosic tissue produce changes in the vital functions of the system, by causing a change in the oxygenation of the blood. But the question recurs, Where does the hæmatosic power reside? Some maintain that hæmatosis commences in the lacteals; the chyle, they maintain, has already become blood before it is poured from the receptaculum chyli into the vena cava on its way to the right side of the heart, and attempts have been made to show that, already, in the receptaculum, blood-discs of a light pink color are formed. Harvey believed that all the blood of the body passes through the heart in three minutes and a half. The jet of chyle into the superior cava is, consequently, almost immediately dispersed throughout the whole mass of the blood—it can no longer be detected. No one has seen the globular chyle corpuscles in the blood. It enters the blood-vessels as chyle, but ceases to be chyle the moment it enters the current of the circulation. Now, what converts the chyle into blood? It is not in contact with any other portion of the body than the lining membrane of the thoracic duct before its entrance into the blood-vessels, and its admixture with the blood, and after its entrance, it is in contact only with the lining membrane of the sanguiferous vessels. Let it not, however, be forgotten that the membrane lining the thoracic duct, being similar in structure with the lining membrane of the blood-vessels, may act upon the fluid in contact with it in the same manner as the latter does upon the fluid in contact with it. It is more than probable that the lining membrane of both sets of vessels enjoy one and the same function, only different in degree. The moment the chylous corpuscle enters within the great

blood sac—the lining membrane of the cavities of the heart, arteries, veins, and capillaries—it is in contact with no living tissue, save the inner surface of this membrane. This common membrane, which Burdach has denominated the endangium, is, in fact, the true blood-vessel; it is the only portion of the arterial tube which enters into the substance of the organs. The elastic coat of the artery has nothing to do with the proper function of the vessel beyond that of the mere carrying on of the current of blood from the heart to the organs and tissues; the moment it arrives at these latter it ceases, and the organizing, life-supporting function of the capillaries is performed entirely by the inner lining membrane of the vessel. This membrane is, in fact, the eliminary membrane of the blood; it is through it that those powers are communicated to the blood which render it strong or weak. The chyle enters the blood sac, and, in contact with the lining membrane, becomes changed into blood. How soon this change is effected I know not. Will any one maintain that the blood makes itself? Organic cells have a plastic power by which they develop themselves, but this development is according to the particular circumstances in which they are placed. The cell of the blood corpuscle can develop itself only whilst in motion and in contact with the endangium. When arrested in its movement in contact with this membrane, the blood is no longer a living substance, it dies; removed out of contact with this membrane, it also dies; deposited in the substance of the tissues, it lives still, it is true, but then it changes its form, it ceases to be blood; it can live as blood only while circulating in contact with the lining membrane of the great blood sac. This membrane is liable to disease—phlebitis is of common occurrence—the membrane is then inflamed. Of this fact the surgeon and pathologist is fully aware. The former causes it to inflame in order to induce adhesion and an obliteration of the cavity of the vessel as a means of arresting hemorrhage or of curing aneurism. It can become also a pyrogenic membrane, producing a large amount of pus. Now, if it be the eliminating membrane of the blood, as Dr. M. supposed it to be, and can, itself, become the seat of disease—can get sick and can get well—we have revealed to us a fruitful source of discrasy in the blood. But is it the function of this membrane to make the blood? Dr. M. thinks that it is.

Blood can be made nowhere else. The blood is formed and kept alive by the nervous corpuscles of the common membrane of the multilocular blood sac in contact with oxygen. All neurosity is, in fact, the result of the contact and presence of oxygen with nerve mass, but this nervosity is defective whenever the blood sac becomes sick, and the crasis and vitality of the blood suffer in consequence. In anæmic subjects the solid portions of the blood are reduced, and the aqueous augmented. A person in health, in fourteen inspirations in the minute, can take in as many volumes of oxygen as his blood demands for the maintenance of its normal vitality, but the anæmical blood, in consequence of the diminution of its solid or oxygeniferous elements, prevents an adequate amount of oxygen from being taken up in the fourteen inspirations. The anæmic individual can no more acquire in this manner the requisite quantum of oxygen than can a person in the rarified atmosphere of an elevated mountain. In the one case the recipient of the vital stimulant is deficient, in the other the supply. The respiratory movements are consequently increased in frequency. The anæmic patient, whilst at rest in a recumbent posture, may breathe very readily, but when standing, or in motion, he cannot procure, by easy, natural respiration, a sufficiency of oxygen to vivify fully the blood. Tremendous efforts are consequently made, and the respiratory and circulatory functions are disturbed. Where, Dr. M. again inquired, is the blood made? Unquestionably, he replied, in the great multilocular sac formed by the living membrane of the heart and blood-vessels. The fact is, it can be made nowhere else. If it be said that hæmatosis takes place in the lungs, it is still within this membrane, from which it cannot escape in the form of blood without producing universal ecchymosis. The blood is made by an induction, if he might so express himself, exercised by the membrane upon every corpuscle which enters into its composition. The endangium, therefore, the membrana vasorum communis, the hæmatosic membrane, demands our especial attention in a pathological point of view. Is not scarlet fever and erysipelas, in every instance, dependent upon disease of this membrane—are not these diseases, in fact, an inflammation of the lining membrane of the capillary vessels? Small-pox consists in nothing more than this. Typhus fever is often due to the same cause. This fall, Dr. M. saw cases of the latter

disease attended with phlebitis. Hundreds of patients who were laboring under this endangium have been supposed the subjects of some obscure malignant affection or of a common cold. Dr. Meigs attended a gentleman, for seventy days, who was at the point of death. He had no pain in his limbs, but upon examining his legs and groins, Dr. M. detected an enlargement of the crural vessels; he treated him for endangitis, and he recovered.

Pathologists have heretofore directed their attention almost exclusively to the liver, the kidneys, the blood, and the intestinal mucous membrane. The diseased conditions of the lining mucous membrane of the blood-vessels have been overlooked. The pathology of the endangium, Dr. M. believes, however, to open a wide field for research, the results of which will, he is convinced, startle us from their importance.

Dr. CONDIE remarked, that he had followed with the closest attention Dr. M.'s exposition of the views entertained by him in reference to hæmatosis, and the pathological deductions he believed to grow out of those views. He found it necessary to confess, however, that in all Dr. M. had advanced in support of his own peculiar view as to the functions and diseases of the lining membrane of the blood-vessels, he could perceive no fact or argument calculated to clothe those views with even the appearance of plausibility. He should infer from the result of such investigations as he had been enabled to bestow upon the physiology of hæmatosis, that the formation of the blood was a very complicated process—in which the lungs, the liver, the kidneys, the skin, and perhaps the spleen, played each a very important part. That the material of the blood may undergo some change, in the cavity of the vessels, necessary to complete hæmatosis, he was not inclined to deny. As to what that change was, or how it was effected, he pretended to form no opinion—but he could not believe, until stronger evidence was afforded him than has yet been adduced to establish the fact, that this change, whatever it may be shown to be, is caused by mere contact with the lining membrane of the blood-vessels. If blood is made in the superior cava, pulmonary veins, and pulmonary arteries, adapted to the growth and nourishment of the several parts of the system, what is the office of the lining membrane of the veins which return the effete blood from

the several tissues to the right side of the heart? Does it possess also a hæmatosic power, or has the membrane different functions at different points? We can readily account for the disappearance of the chyle corpuscules immediately upon their entrance into the superior cava, from the small number supplied within a given time, compared with the entire mass of the blood with which they are rapidly combined. If, too, it be certain that the entire route of the circulation is accomplished by the blood in three minutes and a half, it must be perceived that within that time these chyle corpuscules have been submitted to the action of the lungs, skin, liver, kidneys, and spleen. They may in this way be as rapidly changed into blood, as by supposing that change to be effected solely by the agency of the membrana vasorum communis. It is true that disease of the lining membrane of the blood-vessels impairs to a greater or less extent the general health of the system—but not always by impairing the hæmatosic function. It may interfere with the freedom of circulation in a part, and cause an effusion of serum or of lymph, or it may render the blood impure, in consequence of the pus or other products of inflammation produced by the diseased membrane becoming mixed with it. Nearly all the morbid results of lesions of the lining membrane of the blood-vessels are dependent upon those of the veins. Now, unless Dr. M. assumes for the venous portion of the membrane the principal rank in the formation of the blood, how comes it that hæmatosis should be so seriously interfered with in cases of phlebitis, as he presumes to be the case. It is true that Dr. M. has hinted at a general phlebitis of the capillaries throughout a large portion of the body—but has adduced no evidence of the fact—nor has he proved the particular symptoms by which this form of phlebitis is indicated. Scarlatina, and erysipelas, and small-pox, and some forms of typhus-fever, he informs us are, in his opinion, dependent upon capillary endangitis. But modern pathology discards all bare hypotheses—it requires the facts revealed by morbid anatomy upon which to build its theories of disease. So soon as Dr. M. shall present to us the same amount of positive testimony in support of his views of the pathology of the diseases just named, as they who connect certain groups of symptoms with lesions of the intestinal mucous membrane, the kidneys, or the liver, have in favor of their views, we shall be better prepared to judge of its value. In the meantime, we re-

ceive his theory as an ingenious suggestion, looking for its confirmation or overthrow to the result of future investigations, which Dr. M., from his position as a medical teacher, has such ample opportunities to promote.

Dr. CONDIE could not, however, agree with Dr. Meigs as to the very frequent occurrence of phlebitis. He has seen many such cases as those adduced by Dr. Meigs as cases of endangitis, seated in the crural vessels; but if these be really cases of phlebitis, Dr. C. confessed himself to be incompetent to form a correct diagnosis of that disease.

Dr. MEIGS replied that, in the case of the gentleman in whom, on the thirtieth day of his illness, he had detected crural phlebitis—he was certain that he was not mistaken. The correct diagnosis was reached by the plan of exclusion. Organ after organ was interrogated, and gave no response confirmatory of disease. The brain, the lungs, the heart, the liver, the stomach and intestines were not deranged—they performed their functions in a manner which proved that they were not the seat of suffering; but when he interrogated the crural vessels he found them painful, hard, and swollen; he, therefore, concluded that they were affected with inflammation, and by bleeding, warm bathing, and fomentation, with rest, and the other well-known remedies for phlebitis, he was enabled to remove or arrest the inflammation, and finally restored the patient to his wonted health.

Dr. PEPPER inquired whether Dr. Meigs considered all the diseased conditions of the blood to be produced by disease in the endangium.

Dr. MEIGS replied that he did consider all morbid conditions of the blood to originate in disease of the endangium. He could perceive no other source of disease in the blood; it is the endangium alone with which we find the blood in contact so long as it continues to be blood; whatever morbid changes, therefore, take place in it, must be produced by that membrane.

Dr. NEILL presented the section of a tooth, which had been supposed to illustrate the mode in which injuries sustained by

the teeth may be occasionally repaired by the deposition of cementum, but which, upon examination, showed nothing more than the accidental exposure, from a fracture of the crown, of the cementum which is usually formed within the upper portion of the crown of all teeth in the advance of life.

INTESTINAL POUCH.

Dr. Wood stated that there had occurred at the Pennsylvania Hospital a case of enteric or typhoid fever. The patient was in that condition in which his experience had taught him that the oil of turpentine was a very efficient remedy. It was accordingly administered in conjunction with stimulants. The tongue which had been dry and polished soon became moist, the general symptoms assumed a more favorable aspect, and the patient appeared to be in a state of approaching convalescence, when he was suddenly attacked with a violent chill, and died in a few hours. Dr. W. had no doubt that the death in this case was the result of peritonitis, caused by the occurrence of a perforation of the intestine. Upon examination after death, numerous ulcerations were found in the ileum from the cœcum upwards, in the process of healing. At the distance of about two feet from the cœcum, there was observed an opening leading into a species of canal, lined by a prolongation of the mucous membrane, extending between the layers of the mesentery and terminating in a cul-de-sac, the bottom of which was perforated by a small ulcer, forming a communication between the bowel and the cavity of the abdomen. There was excessive peritonitis. This, Dr. W. remarked, was one of the only two cases of enteric fever that have occurred to him, in which, under the peculiar circumstances which he has pointed out in his practical treatise as especially indicating the use of oil of turpentine, that remedy had been given without success. Even this case appeared to be getting well under its use. The fatal event was produced by a perforation, the result of ulceration at a point which the oil of turpentine could not well reach. Dr. W. believed that the beneficial effects of the oil of turpentine in producing cicatrization of the intestinal ulceration in enteric fever resulted from its direct action upon the ulcerated surfaces.

Dr. WOOD remarked that the canal or pouch leading from the intestine was about an inch and a half in depth. He did not examine whether it consisted of a prolongation of all of the coats of the intestine. It contained no solid or foreign substance.

Dr. ASHMEAD has seen in several cases abnormal pouches of the kind described by Dr. Wood, but without ulceration or disease.

Dr. NEILL remarked that these pouches are of very common occurrence. Scarcely a winter passes without our being presented with an example of it, in the subjects brought into the dissecting-rooms of the University. These pouches or canals vary in length from one to three inches. He has noticed more than one in the same subject. They are perhaps in many cases, if not in all, the result of a congenital malformation. He knew of one case in which death was the result of a strangulation of the intestine caused by a coil of an abnormal prolongation from the side of the intestine, such as has been alluded to.

Dr. PEPPER observed that in the case described by Dr. Wood, the ulceration by which the perforation through the bottom of the abnormal pouch was produced was not in the tract of the glands of Peyer. Now, supposing the pouch to have been congenital in this case, and he could not well see how it was produced by any disease under which the intestine had previously labored, might not the ulceration perforating its base have been the result of the accidental entrance into its cavity of some small foreign body from the intestine? Dr. P. has seen several fatal cases from ulceration of the appendicula vermiformis, produced in this manner.

Dr. WOOD observed in reply, that the isolated glands are liable to the same ulcerative affection as the patches, and that this was a case of that kind. No foreign body was observed.

Propositions (16–17) for Fellowship were presented.

SUMMARY

OF THE

TRANSACTIONS OF THE

COLLEGE OF PHYSICIANS

OF PHILADELPHIA.

FROM JANUARY 6 TO APRIL 1, 1851, INCLUSIVE.

Stated Meeting, January 6th, 1851.

Dr. Wood, President, in the chair.

Present, thirty-two members.

The following Report was received from the Trustees of the Building Fund.

In compliance with the resolution of the college, requiring a report from the trustees of the building fund at the first regular meeting in January of each year, the Trustees have the honor to report as follows:—

They have received up to this date, from the Treasurer of the College, the sum of *four thousand one hundred and sixty dollars* ($4,160), collected from subscribers to the fund, and have, in addition, received one hundred and forty-three dollars and fifteen cents (143\frac{15}{100}$), interest on investments, amounting together to four thousand three hundred and three dollars and fifteen cents ($4,303$\frac{15}{100}$).

They have also received from subscribers to the fund the following certificates of loan and stock, viz:—Of the Schuylkill Navigation six per cent. convertible loan, payable in 1865, for five hundred dollars ($500); of the Schuylkill Navigation six per cent. convertible loan, payable in 1868, for three hundred and

fifty dollars ($350); and of Schuylkill Navigation stock for fifty-one dollars ($51); amounting together, at par, to nine hundred and one dollars ($901).

The Treasurer of the College has transferred to them, in compliance with a resolution of the College, the following certificates of loan, viz:—Of Spring Garden six per cents, for three hundred dollars ($300); of City six per cents, for three hundred dollars (300); and of Chesapeake and Delaware Canal loan, five hundred and forty-five dollars and sixteen cents ($545\frac{16}{100}$); amounting together at par to eleven hundred and forty-five dollars and sixteen cents ($1{,}145\frac{16}{100}$).

With the cash received, the Trustees have purchased the following amounts of the loans in which they are authorized to invest, viz:—

Spring Garden six per cents,	$800,	at the cost of	$758 00
do. do.	$200,	"	$190 50
City six per cents,	$1,200,	"	$1,227 00
City five per cents,	$700,	"	$617 75
do. . .	$400,	"	$357 00
do. . .	$900,	"	$801 75
do. . .	$300,	"	$273 75
Whole cost, ...			$4,225 75

The Trustees have expended,

For a tin box for papers, . . .	$1 00
For the recording of trust deed, . .	$3 00
Whole expenditure, ...	$4 00

Their account will then stand as follows:—

Whole receipts in cash, . . .			$4,303 15
Whole of cash invested,	$4,225 75,	Making	$4,229 75
do. expended,	$4 00,		
Balance in the hands of the Treasurer,			$73 40

The whole of the investments with their par value are as follows:—

1. In Schy'll Nav. six per cent. convertible loan,	$850 00
2. In Schy'll Nav. stock, ...	51 00
3. In Chesapeake and Delaware Canal loan, .	545 16
4. In City six per cent. loan, . .	1,500 00
5. In City five per cent. loan, . .	2,300 00
6. In Spring Garden six per cent. loan, .	1,300 00
Value of the whole at par, . . .	$6,546 16

The estimated value of the above securities at the present market price is about six thousand dollars ($6,000).

Signed, January 1st, 1851.

GEO. B. WOOD,
GEO. FOX,
JNO. RODMAN PAUL, } *Trustees.*

On motion, it was *Resolved*, That a committee of three be appointed to inquire whether some plan may not be devised for the publication of the Summary of the Transactions of the College which shall be less expensive and more conducive to its interests than the present one; and if, in their opinion, such shall be the case, to report a plan.

The following gentlemen were appointed the committee—Drs. Hays, Wood, and Norris.

On motion, it was *Resolved*, That the gentlemen composing the publishing committee be added to this committee.

A proposition was presented to amend the Ordinances of the College by striking out all those sections which relate to the appointment of the Standing Committees to report annually upon the progress of the different branches of Medical Science, other than the Committee on Meteorology and Epidemics.

CASES OF CHEESE POISON.

Dr. PARRISH stated that he had recently met with a series of cases of sickness resulting from the eating of cheese, which

possessed sufficient interest to claim the attention of the college. He would, therefore, briefly narrate them, with a view of directing the attention of the Fellows to a source of disease which might escape attention, and also of inciting investigation into the causes of the phenomena witnessed in these cases.

I was called, says Dr. P., about five o'clock in the evening to visit a poor family, residing in my neighborhood, who were reported to have been taken sick within a few minutes of each other, after eating their accustomed afternoon meal.

I found a family consisting of a laboring man, his wife, and six children, all of whom, except the wife, were affected with symptoms more or less severe. The attack of the father was the lightest, and had nearly passed over, while the younger children were laboring under severe vomiting and purging, with dizziness of the head, great prostration of strength, coolness of the extremities, and total inability to sit up. The matter discharged both from the stomach and bowels was thin and watery, and not very dissimilar to the rice water discharges of cholera; the attacks were frequent and distressing, and the cases exhibited, at first view, very much the appearance of poisoning from some metallic poison.

These symptoms were clearly traceable to the food eaten at dinner. They occurred within an hour after partaking of that meal, and the mother of the family, who was alone unaffected, had been absent from dinner on this day.

On inquiry, I found that the scanty meal of the family had consisted of tea, bread and cheese, with nothing else; and on careful investigation I could find no reason to suspect poison in any of these articles.

After directing some simple remedies to relieve the symptoms, I took a portion of the matter vomited to the nearest apothecary, with a view of applying to it some of the most approved tests for metallic poisons.

On mentioning the circumstance to the druggist, he informed me that a family residing near by had been similarly affected on the previous evening, as was supposed from eating cheese bought from the neighboring grocer. This gave a clue to the mystery. I repaired at once to the family in question, and found that a man, his wife, and daughter, had all partaken of a similar meal on the day previous, and had all within an hour been taken

sick. The man was not fond of cheese, and had eaten but little, and he was affected only with slight dizziness and vomiting —while the wife and child, who had eaten nearly half a pound between them, were attacked with severe vomiting and purging, which continued during the night, and they were now just able to sit up. These patients had been attended by Dr. Pennebaker.

These facts fixed the cause of the disease upon the cheese, and relieved me of anxiety as to the result of the cases to which I had been called.

On the following day my patients had all recovered from the vomiting and purging, though the younger ones continued very weak and languid for several days.

I now visited the grocer from whom this poisonous article was purchased, and learned from him the following singular facts.

The cheese from which the deleterious slices were cut weighed originally about ninety pounds, and was one of a large lot from a celebrated dairy in the State of New York. It was a fall made cheese, being but three or four months old, and was considered a rich and fine flavored article.

This cheese had been on the counter for a number of days, and the grocer had cut off and sold nearly seventy pounds of it, to a large number of people, besides having retailed out some eight or nine cheeses from the same lot, without hearing any complaints.

Suddenly deleterious properties were developed, and every person who partook of portions of the cheese sold during a period of two days, amounting to some five or six families, were more or less ill. Those who ate sparingly of it, in connection with other articles, were merely affected with vomiting and dizziness, while others who partook of it more freely were affected as in the cases detailed; the violence of the attack being in proportion to the quantity taken. While of the large number of persons who bought of the same cheese on previous days, many of whom were sought out and inquired of, experienced no inconvenience from its use. There was nothing in the taste or external appearance of this remnant to indicate its poisonous properties.

A slice from it was carefully subjected by my brother, Edward

Parrish, to all the processes employed for detecting mineral poisons, without any result.

In endeavoring to account for this singular phenomenon, I could explain it in no other way than by reference to the peculiar state of the atmosphere existing at the time of the attack.

It was in the first month (January), during a spell of remarkably damp, foggy, and mild weather, succeeding to a cold atmosphere. In the two days during which these cases occurred, the air was loaded with moisture, and the fog on the Delaware was so heavy that the boats were very much impeded in crossing.

Might not the softening of a mass of cheese, after being hardened by freezing, develop deleterious properties?

It is said, I believe, by chemists, that under favorable circumstances the oily matters in cheese may be converted into an irritating acid, which may become poisonous, thus giving rise to the cheese poison and the sausage poison, mentioned particularly by some of the German writers. In new cheeses, this change would be most apt to occur, and would seem to furnish the most rational explanation of poisonous properties being suddenly developed in a mass heretofore innocuous.

This view derives confirmation from a series of cases of the same kind, occurring under similar circumstances.

I am informed by one of our Fellows, Dr. Ludlow, that in the latter part of the winter of last year, he was called to several cases of severe sickness following the eating of cheese purchased of a respectable grocer in his neighborhood. His recollections are, that the weather was unusually mild for the season, damp and mucky, the cases occurred in rapid succession, and in several instances the symptoms were very severe.

He could not account for the sudden development of these cases, as there was nothing in the taste, smell, or external appearance of the cheese to excite suspicion, and yet the sickness could be clearly traced to this article.

A recent visit to this grocer revealed a similar state of facts to those before mentioned.

He had on sale a large and what was considered a remarkably fine flavored cheese from a New York dairy, of which he had sold about half, without any complaint; on the contrary, many of his customers praised it, and sent for more, eating it with entire impunity.

Suddenly he had complaints from various quarters of persons having become very sick immediately after partaking of this heretofore highly esteemed cheese, and he at once put it aside. The state of the atmosphere was not recollected, as it never occurred to him that this had any influence, though the season of the year he remembers.

What tends, however, in this case to confirm the theory, that the cause of the poisonous property was atmospheric, and that a change of weather might remedy it, is, that the other portion of the offending cheese was afterwards sold out in slices by another person, without any complaints from his customers.

The same thing has happened in several other instances, and all, so far as I can learn, in mild, newly made cheeses from the New York dairies.

So far as my investigations have extended, I should say that not less than a hundred persons have been rendered sick, and some of them ill, from this cause, under the observation of physicians in Philadelphia—although I am not aware of any serious results having happened.

The subject is one, however, of sufficient importance to claim the attention of physicians; in order that, if possible, the causes which produce this sudden development of poisonous properties, in an apparently safe article of diet, may be discovered and averted.

So far as the limited number of observation here detailed will justify any conclusions, we might say:—

First. That in all the instances of sickness from cheese poison, the cheese has been mild and newly made.

Secondly. That the deleterious properties of the article have been developed, suddenly, in a mass not previously injurious.

Thirdly. That in all the cases the cheese had been exposed to the air; and that in all probability a peculiar state of the atmosphere was the immediate cause of the development of poisonous properties.

If these conclusions be correct, it would seem proper that all newly made cheeses should be protected from the air, especially in damp weather—and that their too free use as an article of food, to the exclusion of more wholesome and substantial aliment, should be discouraged.

In looking into some of the authorities on this subject, I have

found that poisoning from tainted cheese has been noticed by several authors. Gemmingen, of Nuremberg, reported a number of cases of serious sickness, and one death, from this cause as early as 1762. Hennemann reports a series of similar cases in Hufeland's Journal for 1823. Kühn, of Leipsic, wrote a book on the subject, about the year 1828. The German chemists have also recently been analyzing spoiled cheeses, and find that during decomposition a poisonous property is developed, which they term an acid cheese-fat, which is in some instances combined with ammonia. This acid is analogous to the fat acid of spoiled sausage meat, which has produced such extensive mischief in some parts of Germany as to attract the attention of the government. I am informed by my friend Dr. Keller (to whom I am indebted for the information derived from the German authors here noticed), that Kerner, a German author, who wrote in 1820, has reported eighty-four deaths occurring from eating sausage meat, in which a fatty acid had been developed; and Dr. Weiss reported six additional deaths in 1824.

The extensive manufacture and use of cheese in this country, as a staple article of food for the laboring classes, renders it important that the facts now stated should be known; that while no needless alarm need be created as to the moderate use of the article, physicians should be aware that under peculiar circumstances newly made cheese may form a cause of severe and even of dangerous illness.

AMAUROSIS AND GRANULAR DISEASE OF THE KIDNEYS.

Dr. HAYS called the attention of the Fellows to the connection which existed between amaurosis and granular disease of the kidneys, and also protrusion of the eyeball. He had seen several cases of amaurosis with striking protrusion of the eyeball, all accompanied during the life of the patients with albuminous urine, and after death presenting granular disease of the kidneys. These cases had convinced him that amaurosis was very frequently a consequence of this peculiar renal disease. In all these cases, there was also a peculiar tint of the skin, particularly of the face, which Dr. H. was inclined to consider as characteristic of Bright's disease of the kidney.

The first case was that already reported to the College, in connection with the preparation of the kidney, exhibiting its diseased condition, now in the pathological cabinet of the College. The gentleman who was the subject of this case had been under the care of a homœopathist previously to being seen by Dr. H. There was decided prominence of the eyeball, and the peculiar complexion alluded to, and, as the preparation will show, the kidneys were the seat of granular disease. The patient died in a day or two after he was seen by Dr. H.

The second case occurred in the wife of a physician. She was a healthy young woman at the period of her marriage. About fourteen months afterwards she was threatened with abortion, and in a short period subsequently was seized with convulsions, and aborted at the fifth month of pregnancy. Soon after she became amaurotic, and Dr. H. was requested to see her. She was then anæmic—as was supposed in consequence of the loss of blood she had sustained—and there was a very marked prominence of her eyeballs. An aneurismal tumor existed at the bend of the arm, and considerable dropsical effusion into the cellular tissue of the face and limbs. The husband was not aware that her urine presented any abnormal condition; on examination, however, it was found to be highly albuminous. The patient went on from bad to worse, and ultimately, after a convulsive paroxysm, died. There was no doubt in this case of the existence of granular degeneration of the kidneys. Although no *post-mortem* examination was made, still the condition of the urine plainly pointed out this condition of the renal organs.

The third case had, previously to coming under the care of Dr. Hays, been treated homœopathically. The patient, an athletic farmer, in the meridian of life, had gradually become amaurotic—he was apathic, taciturn, and inclined to sopor. His limbs and countenance slightly œdematous. Bowels regular, eyes slightly but very perceptibly protruded. Urine spare in quantity and highly albuminous. The patient became more and more amaurotic, and torpid. The dropsical effusion increased in extent. He experienced one or two attacks of convulsions. Complained in the last week of his existence of acute pain in the left side. A variety of treatment was tried with little or no effect. He finally died, and upon examination, the kidneys were found to

be granular, and the liver affected with cirrhosis. The left pleura presented indications of recent inflammation.

The fourth case was that of a married lady whom Dr. H. was then attending. When pregnant with her first and only child she had become dropsical; her sight had gradually become impaired. When seen by Dr. H. the balls of her eyes were very prominent, so much so as to make her ashamed to be seen abroad. She was extremely debilitated, and very anæmic. There was a swollen and puffy condition of the face and some degree of apathy. She was placed upon a good diet and a tonic course of treatment. Under this the eyeballs became less prominent, the puffiness of the face diminished, the albuminous condition of the urine decreased, her strength and mental activity increased, and her power of vision was improving, when, contrary to Dr. H.'s express advice, she greatly fatigued herself by walking too far. Her debility in consequence returned, but by perseverance in an invigorating course of treatment she is again mending, and Dr. H. entertained some hopes of her final recovery.

Dr. Hays had brought forward these cases to direct attention to the fact of the frequent dependence of amaurosis upon granular disease of the kidneys, and to the importance of an early diagnosis of these cases, it being in their early stage, alone, that we can hope, by an appropriate treatment, to effect their cure. In every case of amaurosis attention should be paid to the state of the kidneys and the condition of the urinary discharge.

Dr. PEPPER has observed an amaurotic condition of the eyes in connection with granular disease of the kidneys. A morbid prominence of the eyeballs has not, however, been noticed by him in such cases. Dr. P. saw in the Pennsylvania Hospital a case of amaurosis in a female laboring under granular disease of the kidneys. The patient was discharged much improved, but subsequently died of convulsions.

ELECTRO-GALVANISM IN NARCOTISM.

Dr. EVANS was desirous of calling attention to the powerful influence which the employment of electro-galvanism is capable of affecting in rousing patients from the state of stupor produced

by the introduction into the stomach of large doses of opium. He had been recently called to a case in which forty-five grains of opium had been taken eight hours previously. When Dr. E. saw the patient the powers of life appeared to be nearly extinct. Capillary circulation had ceased; the lips were livid; the surface cold; the action of the heart was scarcely perceptible; the respiration was slow and inaudible. Death, it was anticipated, must speedily ensue. Dr. E. endeavored to excite vomiting by the administration of sulphate of zinc, mustard, and other active emetic agents not counterindicated by the nature of the case. But none of them produced the slightest effect. The stomach was washed out by means of the stomach pump. It was found that the greater portion of the opium had passed into the intestines, and from the length of time which had elapsed since it had been taken, it was, doubtless, in part, absorbed. As a forlorn hope, after one hour and a half had been passed in the efforts already made to save the patient's life, it was agreed to try the effects of electro-galvanism. Two galvanic batteries were accordingly procured, and a current of the electro-galvanic agent was passed through the region of the heart. In a short time this organ commenced to act, and within thirty-five minutes the capillary circulation was reinstated. The current was now passed through the region of the diaphragm, and the respiration was soon increased; consciousness became speedily restored, and at the end of six hours the patient was so far recovered as to cause a hope that the functions of life would now go on without further interruption. Six days subsequently, however, the patient died of effusion upon the brain. This case, the Doctor remarked, although a fatal one, shows the importance, whenever we are called to a case of narcotism from an overdose of opium, of our keeping in mind the powerful agency of electro-galvanism in stimulating into activity the benumbed functions of life. In the instance just referred to, though first employed nine and a half hours after an enormous dose of opium had been taken into the stomach, and where death seemed inevitable, we have seen it rouse the patient from a state of complete unconsciousness, re-establish circulation and respiration, and prolong existence for six days. Had it been resorted to earlier, the probability is that the patient's death would have been prevented.

Stated meeting—February 4, 1851.

Dr. Wood, President, in the chair.

Present twenty-seven members.

Drs. William R. Bullock and R. P. Thomas were duly admitted Fellows of the college.

The following additions to the Library were received:

The Transactions of the American Medical Association, Vol. 3. From the Association.

Beiträge zur Heilkunde, Herausgegeben von der Gesellschaft Praktischer Aerzte zu Riga. Riga, 1849. From Dr. Hays.

Der Aderlass in der Lungenentzündung. Von Dr. Joseph Dietl. From the same.

The following Fellows were elected Delegates to represent the College at the next Session of the American Medical Association.

George B. Wood,	D. Francis Condie,
George Fox,	Isaac Hays,
George W. Norris,	Wm. Byrd Page,
W. S. W. Ruschenberger,	William Pepper,
John Rodman Paul,	Joseph Carson,
Francis G. Smith,	John Neill,

Caspar Morris.

The committee on plan of publication for Summary of Transactions reported progress and were continued.

The amendment to the ordinances proposed at the last meeting was adopted.

CASE OF MEMBRANOUS CROUP.

Dr. Griscom read the following history of a fatal case of membranous croup, and presented a preparation of the parts involved in the disease.

The subject of these notes was a little girl who had just completed her third year. She was born and had always resided in the eastern part of the district of Spring Garden. She had fair skin, light hair, and previously to this illness was regarded as a healthy child. Dr. G. was called to see her at a late hour on the evening of first month, twenty-second, 1851, and was informed that she had been suffering from what her parents regarded as a bad cold, with a hoarse cough, since the eleventh instant; the cough and dyspnœa, occurring principally at night, and leaving her well enough to run about the house during the day. Up to that time, they had not sought the advice of a physician. When Dr. G. first saw her she was sitting on her mother's lap, greatly oppressed—her inspiration and expiration were both noisy, not loud, but *wheezing;* the sound in *inspiration* being greatest—her nostrils were dilated, her face pale, and her countenance anxious. Owing to her extreme irritability, it was impossible to note her pulse; and auscultation and percussion were out of the question. Her cough, which was frequent, had nothing of the ringing sonorous character so often observed in croup; it was *suppressed, whispering, suffocative*—the tonsils were somewhat enlarged, and the fauces had a dark red hue. Dr. G. ordered her stimulating pediluviæ, sinapisms to chest and throat, and an active emetic of ipecac. tart. ant. and calomel, the latter to be repeated if the oppression was not relieved.

1st mo. 23d, 8 A. M. Respiration and cough were unchanged, the anxiety of countenance was increased, and her lips were livid. Ordered leeches to larynx; fluid extract of senna as a cathartic, and to be vomited with pulv. alum when oppressed.

At 11 A. M. Dr. G. succeeded in making an imperfect auscultation—could detect no mucous rale—*feebleness* was the prominent characteristic of the respiratory sounds. A solution of the nitrate of silver (gr. xx. to the ℥j) was applied to the fauces.

At 3 A. M. there was an improvement, and at 10 P. M. the symptoms were all aggravated. The alum emetic was repeated, and the following prescription directed: ℞.—Mass. hydrarg. gr. vj; potass. citrat. gr. xx; syrup. ℥ss; aquæ f℥j. M. ℥j to be given every two hours, and tr. opii, gtt. ij every two hours until sleep was procured.

On the 24th, the 3d day of Dr. G.'s attendance, at 7 A. M. the patient was obviously improved—her respiration was nearly

normal—her countenance placid, and her lips less livid. She was sleeping with a pulse of 120 and soft. When awake she asked for food.

Her countenance easier throughout the day, cough louder with some mucous sound.

25th, 7 A. M. as yesterday.

At 3 P. M. she was more oppressed—her cough was husky, her skin dry, and she desired drink. A solution of tart. ant. (gr. i to ℥viij;) was directed, ℥i every hour.

At 10 P. M. there was no improvement in her respiration, it was more noisy—the skin was cool and had lost its harshness. The tartar emetic was discontinued and the former mixture resumed.

On the 26th, at 8 A. M. Her dyspnœa was exceedingly distressing, her lips were livid, pulse 150, and her countenance had the beseeching expression which we so often witness in the little sufferers from this terrible malady. A mucous rale is now heard in the larger bronchial ramifications. At 2 P. M. she had been somewhat relieved by an emetic of sulphate of zinc; and when seen at 9 P. M., she had just died. She left her mother's lap, walked across a large apartment, got her little chair, placed it by her mother's side, sat down in it, and almost immediately expired.

Autopsy 36 hours, *post-mortem*. Drs. Neill, Parrish, and Griscom present. Dr. Neill made the autopsy. No appreciable emaciation—resonance of chest not perceptibly diminished on percussion. On opening the coverings of the trachea, the thyroid vein was found congested and unusually large, a large superficial branch running very near the median line of the larynx. On separating the sterno-thyroid muscles, another branch of this vein was discovered passing directly in front of the larynx and trachea. The jugulars are of the usual size. In the cavity of the chest a general state of venous congestion was found to exist.

The trachea was *filled* with thick mucus resembling pus, and throughout, from the larynx to the ramifications of the bronchia, was lined with a distinctly formed false membrane.

The bronchial ramifications were in places *dilated*, and, as far as they could be traced by the naked eye, were filled with thick, tenacious, pus-like mucus, similar to that in the trachea;

beyond this, a section of the lung revealed numerous yellow and red points, and was destitute of the ordinary frothy serosity. An examination of the preparation of the parts by Dr. Neill, which is herewith presented, will show that the larynx is entirely closed.

This, although a well-marked case of ordinary membranous croup, has some points of special interest. The insidiousness of its onset is one of these. The parents, who are intelligent persons, had no idea that this their only child was in danger, until the evening Dr. G. was called, which may be regarded as the 11th day of her sickness. If we can rely upon the statements of the family, her cough never had what is usually called the "croupy" sound. The delusive evidences of improvement, which in this case occurred on the 13th day, are not unusual, although her death was perhaps more than usually sudden.

The anatomical characteristics of her neck on reference to the operation of tracheotomy are worthy of note—independently of its obvious uselessness in this case, had it been performed, there would also have been both embarrassment and danger from the large branches of the thyroid vein, which lay immediately in the place usually selected for the incision.

COD-LIVER OIL IN SCROFULOUS AFFECTIONS AND IN CONSUMPTION.

Dr. HAYS stated that he had employed the cod-liver oil extensively, during the last three years, in the Wills' Hospital and in private practice, in scrofulous ophthalmia, in cases of granular lids, in scrofulous enlargement of the external glands, in cases of hip disease, and in the various forms of external scrofula with the best effects. In scrofulous ophthalmia he had found it of all remedies the most efficacious. Under its use the constitution becomes invigorated; the glandular swellings are dissipated; and the cutaneous affection so commonly met with about the face and ears disappears. He has, also, employed it in several cases of granular lids with the most favorable results. In this affection, patients are very liable to relapses from slight causes; this tendency he has found to be removed by the use of the cod-liver oil in conjunction with the syrup of the proto-iodide of iron. In the case

of a lad now under treatment affected with scrofulous enlargement of the cervical glands, chronic conjunctivitis, and granular lids, with deposit of lymph in the cornea, and intense photophobia, by the use of the cod-liver oil and proto-iodide of iron, with the occasional application to the eye of the liquor plumbi, all the symptoms of disease are rapidly disappearing. The patient can bear the light without inconvenience, can read small print, and has all the general appearance of restored health. He has escaped a relapse now for four months. The photophobia has disappeared entirely. In another case of excessive photophobia, with granular lids and penetrating ulcer of the cornea, the cod-liver oil has been used (at the suggestion of the *interne* of the Wills' Hospital, Dr. McIntyre) with the most decided advantage.

Dr. H. has now employed the cod-liver oil in from two hundred to two hundred and fifty cases of scrofulous ophthalmia and granular lids, and in most of these cases the benefit resulting from its use has been very striking.

Dr. DARRACH would call attention to some other cases of disease, probably of a strumous character, in which he has found the cod-liver oil a most excellent remedy. Thus, in some instances, we find children who have suffered an attack of summer complaint, upon recovery, not to regain their former state of health, but to remain in an emaciated, anæmic condition. When the ensuing summer arrives, these children are liable to an attack of bowel complaint, from which they appear to suffer as much as they did from the attack of cholera infantum the preceding season. A chronic diarrhœa sets in, and the child pines away and often dies. Now in such cases he believed that it was a strumous taint which caused all the mischief. In some instances of this kind he has found the cod-liver oil to be beneficial. The bowel complaint is arrested and the child has a better appetite and becomes fatter. Again, there is another form of strumous disease. Thus, when scarlatina has gone through its acute stage, various sequelæ remain, the child becomes cachectic, thin, emaciated, chronic discharges take place from the ears, and the patient remains often a feeble, puny sufferer for many years. Here, too, he has found the cod-liver oil beneficial. A third form of strumous disease is where, after an attack of catarrh, the child con-

tinues pale, listless, weak, with cough and expectoration, here likewise the cod-liver oil will be found our best remedy.

In cases of incipient or suspected consumption, the cod-liver oil often produces the very best effects. In the case of a female who had always been irregular in her menstruation, thin, pale and debilitated, a cough finally set in, attended with night sweats and hectic fever, the cod-liver oil, after its use had been persisted in for some time, produced an amelioration of all the symptoms. Under its continued employment she became finally restored to health.

Dr. CONDIE remarked that he had employed the cod-liver oil pretty extensively. In all the forms of external scrofula, including scrofulous ophthalmia, he had certainly seen much good result from its use; the indications of strumous disease have very generally ultimately disappeared under its use, while the appetite of the patients has improved, and they have speedily exhibited an increase of strength and bulk. It is especially in the scrofulous affections of young subjects that the cod-liver oil had appeared to him to produce the greatest amount of benefit. He had not, however, seen any very striking amount of good result from its administration in cases in which tuberculous deposits had actually taken place in any of the tissues. In tubercular phthisis especially he had rarely if ever observed any positive benefit from its use. He had given it in many cases, and in large quantities, and though it had been taken perseveringly by the patients for a long period of time, he could not say that in a single instance the disease of the lungs had been arrested by it. The onward march of these cases towards a fatal termination appeared to him to be as rapid as those in which the oil had not been given. The wife of a gentleman connected with the public press now under the care of Dr. C. had used it daily for the last three years, and she believes with very decided advantage. But though in her case the affection in the lungs is of a very chronic character, still the frequent attacks of hæmoptysis to which she is subject, and the physical signs revealed by auscultation, indicate, but too clearly, that her disease is making a slow but constant progress.

Dr. WOOD said that he should not be doing justice to his own

feelings were he not to seize this opportunity of communicating to the College the information on the subject under discussion he had derived from his recent experience. He felt himself the more strongly urged to make this communication from the fact, that in the last edition of his work on the Practice of Medicine, he had stated that the only effect he had observed from the use of cod-liver oil was the production of nausea. Now the reason of this he had ascertained was that he had not persevered sufficiently long with the use of the remedy. Subsequently he had employed it largely and perseveringly, in hospital as well as in private practice, and most assuredly he had never met with any one remedy or combination of remedies which had proved so efficacious as this in pulmonary phthisis. It is too soon, however, to say that in any case it will permanently cure the disease. He has certainly seen cases presenting, apparently, all the phenomena—the general symptoms as well as the physical signs—characteristic of phthisis, get well under its use. The patients have, at least, lost their cough and fever, their respiration has become natural, and they have acquired strength and flesh. In one case which occurred in the hospital, auscultation indicated the existence of a cavity at the summit of one lung, and deficient respiratory murmur in the other. The patient was pale, extremely feeble and emaciated, with hurried respiration, cough, and copious expectoration, hectic fever, and night sweats. Although in this case Dr. W. expected little, even temporary, benefit to result from any plan of treatment, still he thought it his duty to place him under the use of the cod-liver oil. At the end of six or eight weeks, he was surprised to see the patient able to sit up, and considerably improved in all respects. From that time the unfavourable symptoms gradually lessened, the cough and expectoration abated, the respiration became more free and easy, the hectic fever and night sweats disappeared, the pulse increased in strength and diminished in frequency; and, at the termination of four months from the commencement of treatment, the patient had become fat, ruddy, strong, and, to all appearance, entirely well. Upon an examination of the chest, a deficiency of respiration was detected in the vicinity of that portion of the lung in which a cavity had existed—which is precisely what we should have anticipated.

This is the most striking case which he has met with of the cure of pulmonary disease under the use of cod-liver oil.

The natural cure of tubercle is by the tuberculous matter becoming softened, and then discharged by expectoration. Now, if by any means we can so far modify the nutritive process as to prevent a farther deposition of tuberculous matter, we may have a reasonable hope of a cure taking place in many cases of tubercular phthisis. We have the record of instances where this has actually taken place; the cicatrices of the discharged vomicæ being apparent, after death from other causes, many years subsequent to the disappearance of the symptoms indicative of phthisis.

In what had appeared to be the incipient stage of consumption, Dr. Wood had seen several very striking instances of the efficacy of cod-liver oil. In one case, that occurred in a child, he was convinced that there existed a cavity in one of the lungs. So far as the physical signs derived from auscultation were to be depended on, its presence appeared to be established. The patient was emaciated, had cough, impeded respiration, and hectic fever. Dr. Wood had some apprehension that it was a case of pulmonary tuberculosis. The child was put upon the use of cod-liver oil, with a proper diet and regimen, and at the end of six weeks the symptoms of disease had so far disappeared that the patient was considered convalescent. He ultimately recovered.

A middle-aged gentleman, who had suffered from repeated but slight attacks of hemorrhage from the lungs, became, subsequent to one of these attacks, emaciated and enfeebled in strength, with a frequent pulse and obstinate cough. Auscultation revealed no positive indications of pulmonary disease; but the general symptoms were such as to occasion much solicitude. Under the use of cod-liver oil, and at the termination of six weeks, he began to improve, and finally recovered.

In another case, that of a young man about twenty years old, the patient, who was convalescent from an attack of typhoid fever, became affected with cough, very frequent pulse, expectoration, fever, night sweats and emaciation. Auscultation of the lungs evinced the probable existence of tuberculous deposition at the summit. Dr. W. considered this patient in imminent danger, unless he should be able to bring to bear upon his case influences

more beneficial than those he had formerly had at his disposal. The patient was placed upon the use of cod-liver oil, with an appropriate diet and regimen; and was sent on a voyage to Europe. At the end of about six weeks he began to improve; and, on his return, at the end of three or four months, had lost all the symptoms of the disease, except frequent pulse, which gradually diminished under the continued use of the oil; and when Dr. Wood last saw him he was apparently in perfect health.

Here are three cases, in all of which he considered the symptoms under which the patients labored to indicate disease of the lungs, of a very critical, and in one, almost hopeless, character. Under the use of cod-liver oil they all entirely recovered —so far at least as a disappearance of the morbid symptoms and a return of strength and vigor can indicate an entire recovery. He was not prepared to say that they were all instances of pulmonary tuberculosis—though there were strong reasons for believing that in most of them such was the case. They indicate, however, the very excellent effects to be derived from the oil in cases of a very troublesome and threatening character. It is important that the use of the remedy should be persevered in for a length of time. There is much, too, sold for cod-liver oil which contains little or none of the genuine article. If it has a strong taste and smell of boot-leather it may be considered genuine.

Dr. HAYS remarked that the communication just made by Dr. Wood was particularly valuable, and furnishes strong testimony in favor of cod-liver oil as a remedy in phthisis. His own experience of the effects of the remedy in that disease was but slight and by no means so favorable as that of Dr. W. In one case, however, the oil appeared to him to prove decidedly beneficial. It was that of a boy five years old, laboring under a violent cough, which resisted all the usual remedies. During a paroxysm of crying the patient was attacked with hemorrhage from the lungs, which recurred six times within ten days. In one of these attacks Dr. H. was assured that the child had discharged half a pint of blood.

The cough now became more constant and troublesome; the pulse rapid and feeble; there was expectoration of purulent matter, great restlessness, and hectic fever. The child was put on the use of cod-liver oil with a pectoral mixture to relieve the

cough. The patient gradually acquired strength—the cough and expectoration diminished—the appetite returned, and health was finally restored. Since his recovery he has gone through an attack of pertussis without a recurrence of his pulmonary disease, and he now appears to be perfectly well.

Dr. H. has administered the cod-liver oil in cases of phthisis occurring in adults without any benefit—so far as the arrest of the disease was concerned—though he had no doubt the remedy even in these cases was often productive of some good by its influence in improving nutrition.

Dr. PATTERSON had administered the cod-liver oil in a considerable number of cases. In many its use has caused nausea; occasionally giving rise to so uncontrollable a disgust for the remedy as to force him to abandon it. He had employed it in all forms and combination without having succeeded in enabling the stomach of some patients to tolerate it. He had given it in external scrofula, and very commonly found the general health of the patient to come up wonderfully under its use. It was the only internal remedy employed, the patient, however, being at the same time placed under the most favorable hygienic influences. Dr. P. has seen a number of cases of strumous ophthalmia in which iodine and a variety of other remedies had been employed with little or no effect, recover in a few weeks, upon a removal of the patients to the country. Now, although he believed that in such cases the cod-liver oil will prove a useful remedy, we must recollect that it can never become a succedaneum for pure air, a wholesome diet and personal cleanliness. It would be a happy circumstance could it serve in place of these; for the most inveterate cases of external scrofula are met with among the poor placed under the most unfavorable hygienic circumstances, and from the influence of which we often find it impossible to remove them.

It is in the strumous affections of children that the cod-liver oil appeared to Dr. P. to exert the most beneficial effects.

He had administered to persons laboring under pulmonary consumption the dark oil used by skin-dressers in their preparation of certain kinds of leather. It is very rank, and offensive to the smell and taste, and probably obtained from putrescent livers; the patients, however, took it, and believed themselves

benefited by its use. In some cases they certainly appeared to improve in their general health, and became fat rapidly. It has enjoyed for a long period among leather-dressers a reputation for its curative powers in consumption. Dr. P. had never seen a case of decided tubercular phthisis cured by cod-liver oil —whether the kind just alluded to or the purer sorts sold by apothecaries. That it may in some instances arrest the progress of the disease and prolong the patient's life he had no doubt. It may possibly sustain the patient so as to enable nature to repair the mischief that has been already done. In one case which came under his notice, the patient had a cavity in one of his lungs, and tubercular deposition in the other. He had cough, copious expectoration, emaciation, hectic fever and night sweats. Under the use of the cod-liver oil the patient fattened very rapidly —the sweats diminished, the face became flushed, the lips red, the pulse full and strong. The oil was in this case administered in porter, which may probably have increased its fattening influence. The patient was suddenly attacked with a profuse hemorrhage from the lungs. How far in this case was the increased hæmatosis, the overloading of the blood-vessels and the consequent hæmoptysis the result of the porter and cod-liver oil taken by the patient?

Dr. CONDIE remarked that the statement made by Dr. W. in reference to his recent experience of the curative powers of the cod liver-oil was to him replete with the greatest interest. Although there might, perhaps, be suggested a doubt whether, in some of the cases in which the cod-liver oil was found by Dr W. to be so signally beneficial, the existence of tuberculation of the lungs was very positively established, still they were all certainly marked by symptoms which could not fail to create a good deal of uneasiness in the mind of both patient and physician, and for the removal of which it was very desirable that a more efficient remedy than we have heretofore possessed should be discovered.

The experience of Dr. W. would appear to indicate the cod-liver oil as that remedy. Dr. Condie had prescribed the oil in twenty cases of decided tubercular phthisis with the view of testing its curative powers; in these, accurate records of which he has preserved, the remedy did not appear to exert any influence in arresting the fatal progress of the disease, although the utmost

care was taken to procure oil of the purest quality, and the patients took it in large quantities, and continued its use unremittingly for a long period. Still it is possible that, in a more extended use of the article, it may be found, in some cases of even confirmed consumption, to be a more efficient remedy than Dr. C. has yet found it to be; though it would appear to him that it is in chronic bronchitis, and in the incipient stages of pulmonary tuberculosis, that we are to expect from its use the greatest amount of benefit.

Stated Meeting, March 4th, 1851.

Dr. Wood, President, in the chair.

Present thirty members.

Dr. J. B. Biddle was duly admitted a Fellow of the College.

On motion, it was *Resolved*, That the President and Secretary be directed, in the name and on behalf of the College, to petition the Legislature of Pennsylvania for the passage of a law providing for a system of Registration of Births, Marriages, and Deaths, as they occur throughout the Commonwealth.

The majority of the Committee appointed to inquire whether some plan may not be devised for the publication of the Summary of Transactions which shall be less expensive than the present one, and more conducive to the interests of the College; and, if in their opinion such should be the case, to present a plan, made a report, with a proposition by which the College would incur no expense in the publication of the summary, while its extensive circulation would be secured. The minority of the committee presented also a report and plan, by which the expense of printing and whatever profit should result from the sale of the Summary were to be divided equally between the College and a responsible publishing house in Philadelphia.

Both plans were rejected.

Propositions (20, 21, 22) for Fellowship were presented.

Stated Meeting, April 1, 1851.

Dr. Wood, President, in the chair.

Present, twenty-five members.

The question being raised whether a ballot resulting in the rejection of a candidate for Fellowship could be reconsidered, upon a motion to that effect, made and seconded by those who voted with the majority, the President decided that it could; which decision was appealed from, and reversed by a vote of the College.

The Committee of Publication reported that they had received from Messrs. Lippincott, Grambo & Co. a proposition in reference to the printing and circulation of the Quarterly Summary of Transactions, which they submitted for the consideration of the College.

Upon motion, the said proposition was acceded to.

Dr. Ludlow made some remarks in reference to a case of death from violence, to which he had been recently called, and in which a post-mortem examination had been made, in his absence, and without his knowledge, by a physician who had no connection with the case, but had been called in by the Coroner expressly to make the examination. The examination was made in so unskillful and slovenly a manner as to afford no means for detecting the actual cause of death, upon which, however, Dr. L. has been summoned to give his opinion, as a professional evidence on the part of the Commonwealth.

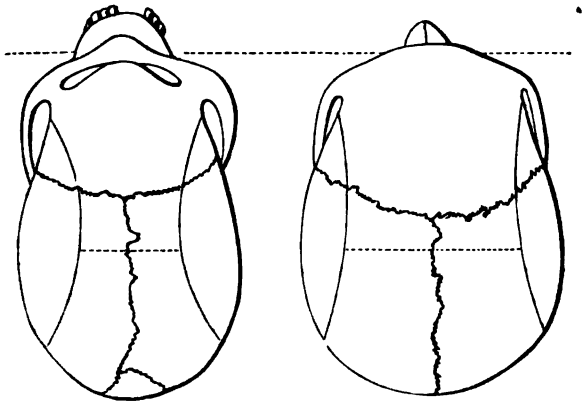
Proposition (23) for Fellowship was presented.

TEMPORAL RIDGES OF THE AFRICAN CRANIUM.

Dr. Neill exhibited to the College several skulls of different races, for the purpose of illustrating a point hitherto not observed by anatomical or ethnological writers.

In viewing the superior surface or norma verticalis of the

African cranium, it will be found that the distance between the temporal ridges is so small, in comparison with that of other races, that it may be considered as a characteristic peculiarity.



African. Caucasian.

By measurement, in thirty-three African heads, the smallest distance between the ridges averaged 4¼ inches; in twenty-nine Caucasian the same distance averaged 5⅜ inches.

The temporal fossa is larger in every respect in the African head.

CANAL OF FONTANA.

Dr. NEILL remarked that the canal of Fontana is one of those points in anatomy, concerning which there has been considerable discussion. This has arisen from the difficulty in proving its existence by demonstration. Owing to the want of success in injecting it, some have even denied its existence, and there are others who consider it quite equivocal.

The text-books of the present day are by no means uniform in their references to it, and their descriptions of its position and character are very often vague and unsatisfactory.

"A minute vascular canal is situated *within the ciliary ligament*, called the ciliary canal, or the canal of Fontana, from its discoverer."*—*Anat. Vade Mecum*, Lond., 1847.

* Felix Fontana, an anatomist of Tuscany. His description of a new canal in the eye was published in 1778, in a letter to the Professor of Anatomy in ———.

"Some anatomists describe, under the name ciliary canal, or the canal of Fontana, a very small and extremely narrow circular space, which is formed *between the ciliary circle*, the cornea, and sclerotica.

"This space can be filled with injection, and it is *not certain* that it is not a cavity of a blood-vessel."—*Cruveilhier's Anatomy*, Harper's edition, p. 656.

"A small circular canal has been described in it by Fontana; this appearance most probably arises from a circular blood-vessel or inosculation."—*Dublin Dissector*, vol. ii. p. 651.

"The anterior border of the sclerotic is circular, beveled off on the internal surface obliquely backward (*sulcus scleroticæ*) for the reception of the corresponding beveled border of the cornea. Both are firmly united together.

"Between them and the *ligm. ciliare*, which is here also attached, we find (in animals) *sinus circularis venosus iridis s. canalis Fontanæ*, a very narrow circular canal which receives the veins and blood of the *iris*, which is driven out from these during the enlargement of the pupil, and is said to give off *vv. ciliares anticæ;* but in man it is placed in the substance of the cornea, as *canalis Schlemmii*."—*Von Behr's Hand-Book of Human Anatomy*, p. 264.

"On the inner face of the cornea, at its junction with the sclerotica, there is a slight groove where the iris meets the ciliary ligament, and is attached in contact with it.

"This is for the lodgment of a small vein called the *sinus circularis iridis*, or *canaliculus Fontanæ*, which communicates with the anterior ciliary veins."—*Pancoast's Wistar*, p. 414.

"Fontana asserted, from seeing it in an ox, that a circular canal was to be found in this ligament; many examiners have failed in finding it, and its existence is denied by Arnold, who states it to be a venous tube in the thickness of the sclerotica for receiving the veins of the iris, and called by him circulus venosus iridis. It cannot be injected, except from the arteries."—*A Note to Horner's Anatomy*, vol. ii. p. 449.

"In this situation and between the annulus, the cornea and the sclerotica, is enclosed a small circular canal, named the *canal of Fontana*, or sinus circularis iridis."—*Quain and Sharpey's Anatomy*, part iii. p. 913.

"At the most anterior part of the sclerotica is found in mammalia and in birds *a large canal* of one-sixth of a line in breadth, which in man occupies the furrow of the sclerotic, and consequently assumes a circular form.

"It is called the *canal de Fontana* (canalis Fontanæ *seu* Schlemmii). It is penetrated by the circular vein of the ciliary ligament.

"When it is injected with mercury the metal fills the veins which come from the sclerotic, whilst the others are seen to penetrate the cornea, where they anastomose together in a net-work."—*Encyclop. Anatom.*, vol. v. *Splanch. par E. Huschke.*

"This venous circle was described for the first time by Ruysch, but more particularly by Hovius. Twenty-one years after *Fontana* described

in animals the canal which bears his name, and it has also since been noticed by Murray, Kieser, Treviranus and Hegar.

"*Subsequent* anatomists *deny* its existence in general, or at least in man, viz: E. H. Weber, J. F. Meckel, who does not speak of it in his Manual, Sœmmering, Bichat, Jacobi, Portal, Blainville, Cloquet, and others.

"Lauth, in his Manual, p. 261, M. J. Weber, Tiedemann, Retzius, and especially Schlemm, in Rust's Handbuch, and Arnold, found it full of blood or injected it, but regarded it as a different canal from that which Fontana has described, until Arnold called attention to the identity of the canal of Fontana with that of Hovius, and proposed the name of *circulus venosus Hovii s. sinus circularis iridis.*

"It is singular that it is so rarely found full of blood in man (only in those who have been hung), perhaps on account of its contractility; and because of its valves it cannot be injected through the veins, although it is very practicable through the arteries.

"In man, when the ciliary ligament is detached from the sclerotica and cornea, this canal adheres to the latter, but in animals it is situated deeper in the ciliary ligament, with which it is removed. Hueck describes three different canals of Fontana, an *anterior*, *middle*, and a *posterior*. The *anterior* is situated behind the plaited (pectine) ligament of the iris, between the fibres of which it communicates with the anterior chamber, from which, Hueck says, it receives the aqueous humor. Krause also considers it as an artificial production from the destruction of a very loose bed of cellular tissue existing in this place.

"Hueck, besides describing a *middle* and a *posterior* or external canal of Fontana, separates again the sinus venosus iridis from the anterior. His middle canal of Fontana, in breadth .06 of a line, is situated between the external face of the orbiculus ciliaris and the internal face of the sclerotic, closed behind by the ciliary ligament, and before by the union of the orbiculus with the cornea. His external canal of Fontana, in breadth one-eighth of a line, is a flat space between the ciliary ligament and the sclerotic, which limits in front the very solid anterior extremity of the ligament, but which is wanting in the human eye, because man has but an insignificant ciliary ligament. I have not seen in the human eye but one, situated at the internal anterior angle of the ciliary ligament, which is the sinus venosus Hovii, that I would willingly regard as identical with the canal of Fontana, or at least with a part of that canal. The position where Hueck places his anterior canal of Fontana differs undoubtedly from that of the ciliary ligament, properly so called, which by its great looseness of tissue has somewhat of a grayish color, but *this* is not a canal.

"If the ciliary ligament is taken off, *this* one has the form of a triangle, of which the right angle corresponds to the edge of the sclerotic, and the sharper angle to the posterior edge. There does not exist in the human eye either the middle or the posterior canal of Fontana."—*Note to Huschke's Splanche.*

Several works of high authority and reputation, such as "*The Cyclopœdia of Anatomy and Physiology*," by Todd; "*The Phy-*

siological Anatomy of Todd and Bowman; Dr. Morton's "*System of Anatomy*," and many others are silent upon the subject.

By a careful examination of the authorities quoted above, it will be found that the canal of Fontana is variously located in the "sclerotica cornea," "ciliary ligament," etc.

It is also spoken of as a "sinus," as a "furrow," and "that it is not certain but that it is a cavity of a blood-vessel."

It is asserted with equal claim to authority, that "it cannot be filled except from the arteries," and that "the veins of the iris empty into it."

I have supposed, therefore, that the exhibition of a full injection of the canal might interest the Fellows of the College, especially as at the time of its preparation it was certainly a novelty in this city, and perhaps in this country.

The canal is situated between sclerotica and cornea, on a line with the anterior edge of the ciliary ligament. It is best seen by tearing off the ciliary ligament, which forms no part of the parietes, and examining the conjunction of the sclerotica and cornea from behind.

It forms a complete circle around the circumference of the cornea, and seems to be one-fifth of a line in diameter.

A section of this canal presents an elliptical figure in the irregular edges, and when placed under the microscope for examination, the injecting matter will not be found in a vessel with well-defined and limited parietes, but it seems to be contained in the areola of the fibrous tissue constituting the sclerotica and cornea. It communicates with the vessels of the sclerotica and cornea, and is more readily filled than the blood-vessels of the iris. It can be injected most successfully from the portal or umbilical vein.

This specimen, which I present to the College, and all others which I possess, were obtained from children.

I would suggest that this canal may be one of the principal sources whence the cornea derives its nutrition, and that by means of it we may account for the rapid regeneration of the aqueous humor by the epithelium upon its posterior surface.

REPORT ON THE PATHOLOGICAL CABINET. BY THE CURATOR—DR. NEILL.

Since the last report, the following specimens have been presented and prepared:—

No. 42. *A Small Tumor Removed from the Neck.*—Dr Parrish gives the following account of the case:—

"This tumor was taken from a lady about forty-five years of age, in March, 1850, by Dr. Isaac Parrish. It was situated on the left side of the neck, a short distance above the clavicle. It was perfectly movable, hard, and dense. The surface of the tumor was not corrugated, nor was the skin around its base altered in structure, except at its lower portion towards the clavicle. The top of the tumor was covered with several dilated veins of small size. The history of its formation was singular. The patient stated that, for more than twenty years, she had had a little patch of diseased skin, resembling an herpetic eruption, just above the clavicle, which remained stationary for many years, giving her no further inconvenience than an occasional scaling of the cuticle and itching. About the period of the cessation of the catamenia, a small tubercle or slight elevation was discovered on the upper edge of this diseased surface, which slowly increased in size until it acquired its present dimensions; the eruptive patches remaining precisely the same as heretofore.

"No pain attended the growth of the tumor, except an occasional shooting through it. It grew very slowly, until within the last few months, when its growth was more rapid. The general health of the patient was not particularly impaired, except from anxiety and apprehension lest the tumor was malignant and would destroy her. It was removed in connection with the patch of diseased skin from which it appeared to originate.

"On cutting open the tumor, it was found to be composed of a dense, white, homogeneous structure, and, on examination with a microscope, caudated cells, without however any areolar cells, were found scattered through it.

"Was this tumor malignant, or would it have become so if let alone?" Presented by Dr. Parrish.

No. 43. *A Large and Lobulated Fatty Tumor of fifteen years*

growth.—Removed by Dr. Norris, at the Pennsylvania Hospital, from the thigh of a man forty years of age. Presented by Dr. Norris.

No. 44. *Gangrene and Perforation of the Appendix Vermiformis.*—Presented by Dr. E. Hartshorne with the accompanying remarks.

"J. M. L., æt. 14; of fair complexion, and rather delicate in general appearance; had usually enjoyed good health. The only complaint to which the attention of her parents had ever been attracted was an occasional catarrh, or something of that kind, which they called 'a bronchial affection.' Some other members of her family had remarked, however, that she was in the habit, from time to time, of suddenly putting her hand to her side and exclaiming that she suffered from a shooting pain in that region.

"About 11 o'clock in the forenoon of Tuesday, Feb. 26th, while sitting quietly at school, she was suddenly seized with nausea and vomiting of bilious matter, and with pain in the bowels. She was taken home at once and placed under the medical charge of a homœopathic practitioner. She continued under the care of this individual until Saturday morning, when he abandoned the case, and Drs. E. Hartshorne, Rodman, and Pepper were sent for.

"The history of the attack up to this period is necessarily uncertain. It appears, however, that the vomiting ceased in a few hours, but the bowels remained without evacuation until Thursday, and the pain continued to increase. On Thursday a motion was obtained with an enema, which was followed by a copious voluntary stool on Friday. The abdominal pain went on with continually aggravated violence, and on Friday irritation of the bladder supervened, presenting, according to their account, all the symptoms of a distressing strangury. By Friday evening the suffering of the poor patient had become intolerable. Pain, distension of the abdomen, unceasing thirst, constant inclination with entire inability to urinate, and finally nausea, with vomiting of a dark-greenish brown fluid resembling coffee grounds—all combined to alarm her family to such a degree that the homœopathic attendant thought it expedient to withdraw from further responsibility, and accede to their desire for other medical advice. Dr. E. Hartshorne was then called, and

saw the patient for the first time about 11 o'clock in the forenoon of Saturday, just four days after the onset of this attack. He found her lying on her back, inclining rather to the right side, with the body somewhat bent anteriorly, and the knees drawn up in front. The countenance was pinched, and altogether cadaverous in color and expression; skin cold and clammy, and the whole body bathed in a prostrating perspiration. Pulse 130, very small and thready, so feeble and uncertain in its action as at times to be almost imperceptible. No pain in the bowels, but great uneasiness in the bladder, which had not been properly evacuated for several hours. Described the pain which she had suffered as seated in the whole lower part of abdomen, but principally around the navel and in the right iliac region. Complained of constant agonizing thirst, and death-like nausea, and was annoyed with frequent retching and ejection of the dark-flocculent coffee-colored fluid already noted. Abdomen distended and resonant, and moderately tender to the touch throughout, but especially around and in the umbilicus (which was red and swollen) and in the right iliac region.

"With the acquiescence of Dr. Rodman, who had arrived and was present, it was determined to relieve the distended bladder; and about a quart of urine was drawn off, to the patient's immediate and manifest advantage. She expressed herself more comfortable, and was enabled to extend her limbs and lie more naturally in bed. The stimulating and supporting treatment, however, which was of course resorted to at once, seemed to be without material effect. Sinapisms to the epigastrium and extremities, and hot bottles to the feet externally, and ice, iced water, iced lime water and milk, iced lime water and cinnamon water, iced wine whey, brandy punch, iced champagne, and *Mist. Ammon. Carb.*, internally, were severally and successively administered to no purpose. In the afternoon, the consultation was joined by Dr. Pepper, and the application of a blister over the lower half of the abdomen, and of a small bladder of pounded ice over the umbilicus, was resolved upon. The blister vesicated in some five hours, having in the meantime brought about copious evacuation of the bladder. The ice-bladder also produced a good effect in dissipating the redness and tumefaction of the umbilicus. No material change for the better, however, could be ascertained. The pulse rose slightly under the stimu-

lus of the iced champagne, which alone was tolerated by the stomach, but it soon fell again, and before night had entirely disappeared from the wrists and temples. Abdomen continued to be distended and resonant on percussion, and assumed a peculiar mottled brownish-white and purple hue. The patient was evidently moribund, and died at one o'clock on Sunday morning, that is about the middle of the fifth day.

"*Autopsy*, fifteen hours after death, conducted by Dr. Neill, in presence of Drs. Pepper, Rodman, and Hartshorne. External aspect—spare, but not emaciated; slight, small frame; abdomen distended and tympanitic, mottled in color with different shades of white, pink, and yellow. Internally, the walls of the abdomen, which were quite thin, having been divided with a crucial incision, presented a highly injected and roughened peritoneum. The intestines, large and small, were generally congested, the omentum carnified throughout, and the whole mass of intestines and omentum agglutinated together, and bathed in purulent and flaky serum. The vascularity, amount of exudation and adhesion, as well as of pus and serous fluid, were evidently greatest in the right iliac region and immediate vicinity of the appendix vermiformis. This appendage was strikingly inflamed and enlarged in every way, and so firmly bound down and wedged in under the adhesions of the surrounding parts as to require dissecting out with care. It was distended into a sac some four or five lines in diameter, by at least two inches in length, and communicating through a small orifice with the cavity of the caput coli. Its parietes were thickened, and infiltrated with dark blood and serum; its peritoneal coat was highly injected and covered with exudations, and its mucous lining presented traces of extensive inflammation which had run into superficial gangrene. This latter had produced a honeycomb appearance of the inner surface, and had covered it with a dark-greenish, pulpy, and extremely fetid matter.

"On its side, about two-thirds of the distance from its cœcal extremity, an ulcerated perforation, some six lines long by three in width, was found, from which fluid fœcal and other matter had been flowing in small quantities. Immediately behind this opening, and encased by the appendix, a peculiar, moderately-hard concretion, of the shape and color of an elongated olive stone, presented itself, having been apparently

moulded by the cavity by which it was contained. Longitudinal and transverse sections of this mass showed it to have been cast in successive layers, and that it was probably hardened fæcal excrement which had accumulated by a slow deposit from the oozings of the fluid contents of the large intestine through the orifice of the appendix.

"No other evidence of morbid action in the abdominal or pelvic cavities, except a congested and œdematous condition of the ovaries and fimbriated tubes. The right ovary was enlarged to more than twice its natural size, and affected with a serous cyst of the size of a large English walnut. The left was similarly affected, but not to the same extent.

"The examination was not extended beyond the cavities described.

"The previous history of this case, and indeed of its progress towards the fatal termination, are too vague and uncertain to render a report of it as useful as the importance of the disease they would illustrate requires.

"We have been informed that some eight or ten days before she was taken sick at school, she had made an unusual and at the time exhausting effort at jumping backwards with the skipping-rope, having made forty skips or jumps in succession, with a revolution backwards of the rope each time. She experienced a sensation of tearing pain in the bowels at the moment, with nausea, and faintness, but made no remark about it as she soon recovered, and supposed it to be the natural effect of such a feat.

"Beyond this fact, and that of the *suddenness* and short duration of the final attack, we are unable to refer to anything with certainty that may be set down as worthy of note or characteristic in this particular case."

No. 45. *Ossification of the Semilunar Valves of the Aorta.*—This specimen was obtained from a gentleman who died at the advanced age of sixty-eight. It shows to what degree valvular disease may exist without producing any direct inconvenience. He had not been suspected of having heart-disease, although the occlusion of the aorta was so great that the handle of a scalpel could with difficulty be introduced between the edges of the valves.

The deposit of earthy matter had rendered the valves exceedingly thick and rigid, so that but a very small quantity of blood

could have passed through them, and yet his circulation and respiration were never impeded sufficiently to arrest attention except in one instance, which occurred about ten months ago, when he suffered from congestion of the lungs. During his last illness, he suffered again from congestion of the lungs, and slight hemorrhage resulted from it. Presented by Dr. Neill.

No. 46. *Skeleton of a Double-Bodied Monster.*—Presented by Dr. Warrington.

No. 47. *Alimentary Canal, Respiratory Organs, &c., of the same.*—Presented by Dr. Warrington.

The history of this case, and the circumstances connected with the delivery, together with some observations on embryology and teratology, will be given hereafter by Dr. Warrington.

In the dissection and preparation of the specimen, the following peculiarities were observed.

Exterior.—The general appearance is that of two children, having a thorax in common, with a single head. By referring to the accompanying lithograph, it will be seen that the head is apparently single, and that the face presents no peculiarity but a fissure of the lower lip in the median line. On the back of the head, which was very wide, there was a symmetrical double ear, the meatus of which was imperforate.

The thorax was single, common to the two bodies. Upon its exterior were four nipples, two of which are seen in the drawing, the other two were in the same position on the corresponding part of the thorax. There were four upper extremities, all of which were perfect, equally developed, and natural in their positions.

Below the umbilicus the separation was complete. The lower part of each body was perfect. The lower extremities were of the same size and appearance.

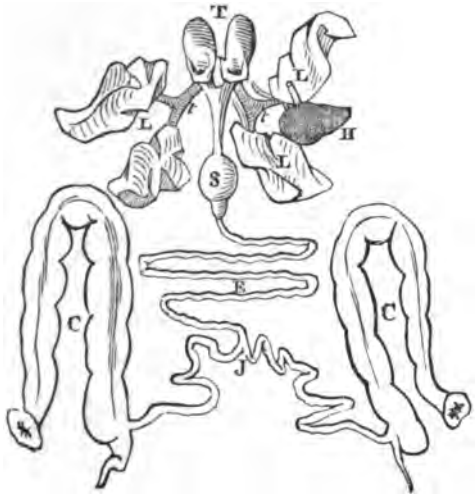
The *Cord* was very thick, and consisted of two umbilical veins, which were of the same size, and four umbilical arteries, one of which was very large, and the other very small. At a distance of two inches from the placenta, which was double, the cord bifurcated, each part entering its own placenta.

Alimentary Canal.—The mouth was a single cavity, containing two tongues, separated posteriorly by an irregular mass covered with skin, which was probably a rudimentary cheek or lip. The fauces and upper part of each pharynx were distinct;

each contained a uvula and two tonsils. The pharynges communicated, and, from the funnel-shaped cavity formed by their junction, there proceeded a single œsophagus.

The œsophagus terminated in a stomach containing a single

Fig. 1.



T. Tongues. t. Trachea. L. Lungs. H. Rudimentary Heart. S. Stomach. E. Intestine. J. Bifurcation. C. Colon.

cavity, though its shape was such as to give the idea that two stomachs had been fused by their lesser curvatures. The antrum pylori is plainly seen on either side in Fig. 1.

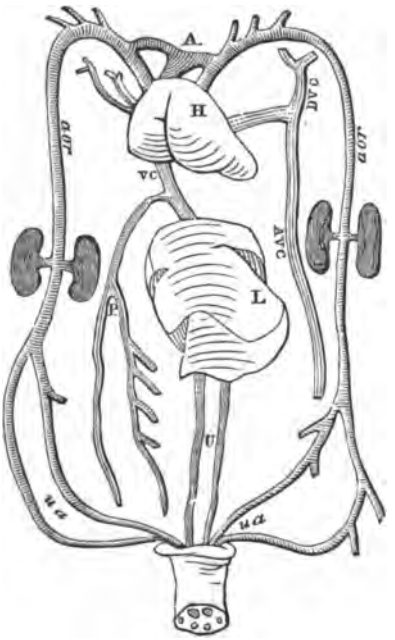
From the pylorus there extended a single intestinal canal which, at a distance of two feet from the stomach, divided into two distinct tubes, each about 15 inches in length. These had all the characters of the small intestine, and terminated regularly at the ileo-colic valve. The large intestine was completely double, there being one for each child; each was perfect from the cœcum to the anus, not excepting the appendix vermiformis, and contained the usual amount of meconium.

The liver was single, large, and symmetrical; it contained two lobes of about the same size, and a single gall-bladder. The spleen and two well-formed kidneys were found in each trunk. The genitals, which were female, were perfectly developed both externally and internally in each pelvis.

Organs of Respiration.—The larynx opened in the usual position in each pharynx, and the trachea and bronchial tubes were regularly developed for each body. The lungs were four in number; those belonging to the right child had a large vessel entering directly at the apex.

Circulation.—There were two hearts; one was rudimentary and situated between the lungs of the left child; it was conical in its shape, consisted of but one single cavity, and from its base there proceeded a single vessel. The other was developed irregularly (Fig. 2.); it was situated under the sternum, to which

Fig. 2.



H. Heart. A. Pulmonary artery. *aor.* Aorta. V C. Ascending vena cava of right body. P. Portal vein. V. Umbilical veins. *u a.* Umbilical arteries. L. Liver. D V C. Descending vena cava of left body. A V C. Ascending vena cava of left body.

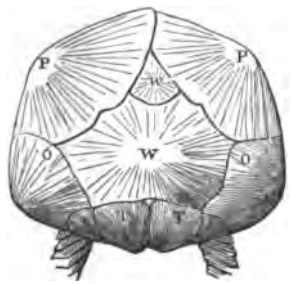
are articulated the right ribs of the right child, and the left ribs of the left child. From the base of this heart there arose an aorta for each child, which occupied its usual position on the vertebral column. The larger arterial branches were regularly

given off, with the exception of the umbilical arteries of the right child, one of which was very large and appeared to be the continuation of the primitive iliac; the other was exceedingly small.

The ascending vena cava of the left child did not pass through the liver, but, after being joined by the descending vena cava, the common trunk thus formed passed behind the heart, emptying into the right auricle. The ascending vena cava of the right child did not seem to exist below the liver, but the blood-vessels from the lower extremities opened into the portal vein, which was large proportionally. The pulmonary artery communicated with each aorta.

Skeleton.—The skeleton measured thirteen inches after it had been prepared and dried. The head measured four inches

Fig. 3.



P. Parietal bone. W. Wormian bones. O. Occipital bones. T. Temporal bones. L. Lateral portion of the occiput.

in its occipito-mental diameter, and three and a half inches in its bi-parietal. The anterior and superior surface of the head was single; the duplication commenced at the base of the cranium. The bones of the face are those of a single head, with the exception of an effort at a double formation of the inferior maxillary bone and of the palate processes of the superior maxillary. The frontal and parietal bones were those of a single head, but there were two occipital bones; to the condyloid processes of each were articulated the atlas of each vertebral column. There were four temporal and two imperfect sphenoid bones.

Below the head, the skeleton was completely double. The

thorax was a single cavity having two sterna, to which the ribs and clavicles were articulated in a very peculiar manner. The right ribs and clavicle of the right skeleton, and the left ribs and clavicle of the left skeleton, articulated with the *anterior*

Fig. 4.

sternum. The left ribs and clavicle of the right skeleton, and the right ribs and clavicle of the left skeleton, articulated with the posterior sternum.

In other respects, the bones of each skeleton were developed and articulated as usual.

SUMMARY

OF THE

TRANSACTIONS OF THE

COLLEGE OF PHYSICIANS,

OF PHILADELPHIA.

FROM MAY 6 TO JULY 1, 1851, INCLUSIVE.

Stated Meeting, May 6th, 1851.

Dr. Bache in the chair.

Present, fifteen members.

James P. Levick, M. D. was duly admitted a Fellow.

The Secretary read a communication received by him from Dr. George B. Wood, as chairman of the committee for the revision and publication of the United States Pharmacopœia, stating that the college would receive from the publishers, "sixteen copies of the U. S. Pharmacopœia, in compliance with a resolution of the committee of revision and publication to distribute the proceeds of the copyright, after deducting expenses, in copies of the work, equally among the several societies represented in the Convention which met at Washington in the month of May last."

On motion, the Secretary was appointed a committee to recommend to the college, a plan for the proper distribution of the copies received by it of the Pharmacopœia.

The Committee of Publication reported that it had been deemed advisable, under the arrangement entered into with Messrs. Lippincott, Grambo and Co., for the publication of the Summary

of Transactions, to commence a new series, the first two numbers of which had been issued.

The following communication was presented and read:—

Cases of Cancer of the Lungs and Mediastinum. By WILLIAM PEPPER, M. D., one of the Physicians of the Pennsylvania Hospital.

Several cases of intra-thoracic cancer having fallen under my observation within the last two years, I have thought it not improbable that their history might prove acceptable to the college, both on account of the rarity of this affection and the exceeding great difficulty which attends its diagnosis.

Although cases of thoracic or pulmonary cancer are mentioned by Morgagni and Van Swieten, as also by Bayle, Laennec, and others, yet it is not until quite recently that this subject has fully engaged the attention of the profession; hitherto, such cases were viewed as mere matters of medical curiosity, "not known to be in any degree influenced by medicine, and too rare to be of much practical importance." There is good reason to believe, however, this disease is of much more frequent occurrence than is commonly supposed, and that in a vast majority of cases it entirely escapes detection, owing to the great difficulty which attends its diagnosis. I have been induced to present the following cases, in the hope that, in connection with the numerous others now on record, they may tend to elucidate this difficult subject.

Medullary Carcinoma of the Mediastinum, Lungs, and Mesenteric Glands.—Mrs. E. Collins, aged 27 years, entered the Pennsylvania Hospital, January 9th, 1850. According to her own account, she had been sick about eight weeks previous to her admission, during which time she suffered with considerable pain in the right shoulder, which was gradually followed by swelling of the right arm, front of the chest, and both mammæ, but more especially of the right one; her catamenia had also ceased for the last two months. Up to March the 1st, the patient remained in the hospital under the care of Dr. Wood; during which time the swelling and hardness of the tissues, and particularly of the right breast, gradually increased; at the same time

she suffered with more or less pain and swelling of the right arm and side of the neck—the swollen parts presenting the same appearances as are generally seen in cases of phlegmasia alba dolens. The treatment consisted in local depletion by cups and leeches, in connection with the use of calomel, squill, and opium, and the occasional application of a blister.

March 1*st.* I now took charge of the patient, and found her in the following condition: Pulse frequent and feeble, and presenting the same characters in both wrists; tongue moist and but slightly coated; no emaciation or œdema of the lower extremities; but at the same time she was evidently very feeble and more or less oppressed, though but little or no cough or expectoration attended; neither can she be said to have any fever. The percussion was perfectly flat over the entire right side of the chest, and loud bronchial respiration could be heard over the same extent, unaccompanied, however, by crepitant or other râle. She was now using five grains of the iodide of potassium three times a day, in connection with wine whey and broth.

No notable change occurred up to the 15th of the month, when it was evident that her oppression had greatly increased, obliging her almost constantly to maintain the sitting posture; at times the paroxysms of dyspnœa would be so severe as even to threaten speedy dissolution, the nails becoming blue, the extremities cool, and the veins of the neck greatly distended. Pulse 90 and feeble; respirations 30 to the minute. Iodine ointment was now applied over the swollen and indurated parts, and protiod. hydrg. gr. j, three times a day, was substituted for the iodide of potassium. To relieve the distressing dyspnœa, occasional doses of morphia, or Hoffmann's anodyne, were administered; with the same view cigarettes of paper saturated with nitre were used, as were also those made of the leaves of stramonium, without, however, affording any very decided or permanent relief. The physical signs remained much the same as at the last report, excepting that the bronchial respiration was now more intense at the summit of the lung and along the spine.

The patient remained in much the same condition up to March 20th, at which time a loud bellows sound could be heard in the course of the ascending aorta and right subclavian vessels. It was now also observed that percussion over the sternum was perfectly flat, and that the right side of the chest was somewhat

distended. At this time the inspiration appeared to be particularly laborious; so much so, indeed, that I was induced to inspect the fauces to satisfy myself that œdema of glottis did not exist; she also evidently swallowed her food and medicine with more or less difficulty; as yet, there has been neither cough nor expectoration. The mouth being a little sore, the iodide of mercury was suspended; the fluid extract of valerian in drachm doses appeared to afford some relief to the dyspnœa, whilst at the same time her strength was sustained by milk punch and beef essence.

March 27th. For the last few days the respiration had become more and more laborious, and during the past night she had an unusually severe attack of dyspnœa. This morning I found the lips blue, and the extremities cold, with an exceedingly feeble pulse, and great prostration, clearly indicating approaching dissolution; stimulants, such as carbonate of ammonia, milk punch, and beef essence were freely administered; but, despite these means, she gradually sank and expired the same evening, about ten weeks from the time of her admission, and two months and a half from the commencement of her sickness.

Examination post mortem, 30 hours after death. The anterior mediastinum was filled with a large irregular tumor, measuring at least four inches in diameter, and completely surrounding the aorta with the large branches given off from its arch; it also compressed the descending cava, pulmonary artery, trachea, and œsophagus. When incised, it presented a smooth white surface, intersected with fibrous bands, and was evidently composed of crude cerebriform matter; when pressed by the back of the scalpel, a large amount of "suc cancereux" escaped from the cut surface. Several small tumors of a similar kind were scattered throughout the right lung, which was dark, solid, and exceedingly heavy; the pleura of the same side was greatly thickened, and contained more than a pint of turbid serum; some of the bronchial glands were enlarged and in a great measure converted into cerebriform matter; the left lung was much compressed by serous effusion, but in other respects appeared healthy. The heart and pericardium were in a normal condition, but the aorta from its arch down to the primitive iliacs was more or less obstructed by a continuous fibrinous clot, having considerable consistency. The head of the pancreas was enlarged and softened,

and evidently contained cancerous matter; the same was true with regard to many of the mesenteric glands and one of the ovaries. The neck of the uterus was in a state of scirrhous degeneration; some gelatinous exudation covered the convex surface of the liver, and the cavity of the peritoneum contained about two quarts of serum. Both mammary glands, but especially the right one, were much enlarged and in a state of scirrhous induration, whilst at the same time the investing cellular tissue was exceedingly dense, and closely resembled soft cartilage.

In this case the pressure of the tumor diminished the calibre of the aorta and of the innominata, and hence it was that a distinct bellows sound could be heard in the course of these vessels; the absence, however, of all thrill or impulse, in connection with the extensive dullness of percussion over the right thorax, entirely precluded the idea of an aneurism being the cause of the existing symptoms. At the same time it is well known that a large aneurism filled with firm coagula may become so wedged between the sternum and spine as to give rise to neither pulsation nor thrill, whilst the resulting pulmonary obstruction might readily be followed by hydrothorax, and, consequently by extensive dullness on percussion: under such circumstances, the same train of distressing symptoms would necessarily take place, and yet it might be exceedingly difficult to ascertain the exact character of the tumor.

It might be supposed that the extensive disease of the lung and pleura, as revealed by the examination post-mortem, had much to do with the excessive dyspnœa and œdema of the chest and arm; but, by referring to the following case, it will be perceived that, notwithstanding the occurrence of empyema, pericarditis, and extensive compression of the lungs by the cancerous mass and serous effusion, the same urgency of symptoms did not exist, simply because the tumor did not press directly upon the contents of the mediastinum as in the present case.

By auscultation and percussion the induration of the right lung was readily detected, whilst the absence of pneumonic sputa and characteristic râle clearly showed that the solidification was not the result of ordinary pneumonia; moreover, the paroxysms of dyspnœa, which closely resembled angina, were far more severe than in ordinary pneumonia or pleurisy when confined to one side. The painful swelling and induration of

the cellular tissue at the upper part of the chest, and particularly under the right clavicle and over the sternum, rendered it quite impracticable to arrive at any accurate conclusion from the percussion of these parts. What also tended to increase the difficulty of diagnosis, was the fact that, notwithstanding the existence of cancerous matter in the different organs, the patient did not present the usual characteristics of the cancerous cachexia.

Most of the peculiar symptoms in the above case were owing to the pressure of cancerous mass in the mediastinum. In the following instances, however, no such pressure existed, and it will be perceived that the symptoms varied accordingly.

Encephaloid Tumor in Mediastinum, pressing upon left Lung, with Cancer of the Kidneys.—Mr. S. aged 20 years, had long been in delicate health; but, until quite recently, had not been obliged to seek medical aid. It appears from his mother's statement that almost five years ago he had been exceedingly ill with inflammation of the lungs, since when he has never enjoyed good health. Dr. E. Wilson was called to see him on the 28th of November, 1850; on the sixth of the following month I saw the patient in consultation, and then made the following note of his case:—

The alveolar processes of the superior maxillary bone had in a great measure been destroyed by necrosis; left lateral curvature of the spine also existed to a very considerable extent. I could not, however, ascertain that he had ever suffered with any syphilitic affection, or that any scrofulous tendency existed in any member of the family. He informed me that for the last few weeks he had suffered much pain in the left shoulder; and upon examination the cervical glands at the root of the neck on the left side were greatly enlarged and painful, and appeared to extend down behind the clavicle of the same side. There were several flat and elastic tumors, about an inch in diameter, just at the junctions of the second, third, and fourth ribs with the sternum, and the least pressure over those points caused the patient considerable uneasiness. Percussion of the cardiac region and upper and anterior part of the left thorax gave a perfectly flat sound, and over the same extent no kind of respiratory murmur could be heard; in the cardiac region, however, there

was a slight friction sound and some thrill; posteriorly on the same side both the respiration and percussion were perfectly natural. Throughout the right side in front nothing abnormal could be detected, and the same was true in regard to the upper and posterior part of the same side; over the lower third, however, the respiration was absent, and no sound could be elicited by percussion, whilst at the same time this part of the thorax was evidently distended. It is also worthy of remark, that percussion over the upper part of the sternum was perfectly flat.

In connection with the above physical signs, the patient was now suffering with considerable difficulty of breathing, and his prostration was so great that he was no longer able to leave his bed; the cough was but slight, and unattended by expectoration; nor was there any fever, though the pulse was somewhat accelerated and feeble; his emaciation was considerable and rapidly increasing, but unattended by œdema. Iodine, with cod-liver oil and a highly nutritious diet, was now prescribed.

I did not visit the patient again, but was informed, by Dr. Wilson, that his dyspnœa gradually increased, whilst at the same time his strength rapidly declined, and he expired about two weeks after my visit.

Examination post-mortem, 48 hours after death. The lower part of the right pleura contained fully a quart of thin puriform matter, compressing the lung and circumscribed by old false membranes; the right lung, however, was perfectly healthy, excepting several patches of apparently old dry tubercular matter. The anterior mediastinum was in part occupied by a large tumor, which encroached upon and compressed the upper lobe of the left lung; the tumor was bosselated, and adherent to the sternum and cartilages of the ribs; when incised, it presented a uniform white appearance, resembling pork fat both in color and consistence. The pleura pulmonalis of the left side was, in some parts at least, half an inch thick and firmly adherent to the ribs; in color and consistence it resembled soft cartilage. The left lung, as before stated, was greatly compressed by the superincumbent cancerous mass, but in other respects was perfectly healthy. The pericardium was more or less roughened by organized fibrinous deposits, but the heart itself was in a normal condition. Both kidneys were enlarged and filled with spherical masses, varying in size from a pea to a cherry, and in structure

closely resembling the tumor found in the cavity of the thorax; the other organs were not examined. In connection with the pathological appearances, I should mention that Dr. Keller, by whom the sectio cadaveris was performed, subjected portions of the above-described tumor to a careful microscopic examination, and found them to present the usual appearances of cancerous matter.

The above was evidently a case of encephaloid disease or medullary sarcoma in a state of crudity. Originating most probably in the bronchial glands or cellular tissue of the mediastinum, it appears to have gradually involved the sternum and ribs, and thus made its way externally, whilst at the same time the lymphatic glands at the root of the neck underwent the same kind of degeneration. Nor is it unlikely that the curvature of the spine, which from the mother's account was of but recent date, was also the result of a cancerous degeneration of the vertebræ; and it is greatly to be regretted that this part of the examination could not have been more fully investigated. The empyema and chronic pericarditis may be considered as merely accidental complications, which so frequently attend cancerous diseases; or, on the other hand, they may be viewed as the results of the inflammatory affection with which he is said to have suffered some five years previously, and from which he had never entirely recovered. The cancerous masses found in the kidneys formed but a part of the general disease, and were only remarkable for the fact that they did not appear to have materially impaired the functions of these important organs—in this respect showing a close analogy to cancerous affections of the liver, when jaundice or other indication of hepatic derangement does not supervene, excepting in those cases where the ducts are compressed or obstructed by the presence of cancerous matter.

In regard to the diagnosis, the dullness of percussion over the upper part of the sternum and left thorax, in connection with the absence of râles or other evidence of pulmonary induration, clearly indicated the existence of a tumor at the summit of the thorax; but it yet remained to ascertain its exact character. The previous attack of pleurisy, together with the after occurrence of necrosis of the alveoli and spinal curvature, rendered it highly probable that the patient was suffering with a general scrofulous affection, and that, therefore, the intra-thoracic tumor

and glandular enlargement at the root of the neck partook of the same character. It should also be remembered that the diagnosis was embarrassed in this case by the absence of yellow tint, œdema, and other indications of the cancerous cachexia. In most the cases of a similar character which have been reported, the pressure of the tumor has given rise to difficulty of swallowing, partial loss of voice, great hoarseness, tumefaction of the superficial veins, œdema of the face and upper extremities, and more or less feebleness of pulsation in the carotid and radial artery of one side; none of these conditions, however, pertained in the present instance, owing to the fact of the tumor inclining to the left, and thus in a great measure preventing injurious pressure upon the aorta, descending cava, trachea, or œsophagus.

Interstitial Medullary Matter of Left Lung, with Central Ulceration.—A young woman, aged 20 years, supposed to be in the last stage of consumption, consulted me in her case during the winter of 1848. I was informed by her parents that she had enjoyed uninterrupted good health, until about three months previous to my first visit, during which period she had suffered with cough and copious ropy expectoration, gradual emaciation, and great prostration. Upon several occasions she had also had slight hemorrhage from the lungs. The menses had ceased for the last six months. The respiratory murmur and percussion were perfectly natural over the right thorax; nor could any râles be detected on this side. The left lung, however, appeared to be perfectly solidified, as indicated by flatness of percussion, loud bronchial respiration, and great vocal resonance; at the same time more or less mucous râle could be heard at the root of the lung. In connection with the above-mentioned physical signs, I found the patient suffering with œdema of the lower extremities, dyspnœa, and cough, whilst the skin presented a peculiar straw-colored tint. There was apparently no fever, though the pulse was somewhat accelerated, owing to the great prostration, which had, in a measure, obliged her to keep in bed for the last four or five weeks. The expectoration was but moderate, not exceeding two or three ounces during the day; it was, however, exceedingly ropy, like the white of egg, and somewhat streaked with blood, but in other respects presented nothing very peculiar. In connection with the above history,

I may mention that the parents were both living, and in excellent health; nor could any hereditary tendency to phthisis or carcinoma be traced in the most remote branches of the family.

About two weeks after I first took charge of the case, the physical signs, such as cavernous respiration, gurgling, and pectoriloquy indicated the formation of a vast cavity, extending from the spine of the scapula to the base of the lung. For several days previous to this, the expectoration had been more copious than usual, and more thoroughly mixed with blood and offensive pus. From this time the emaciation and œdema rapidly increased, whilst at the same time her strength failed in despite of the most stimulating and nutritious diet. Small portions of morphia, or extract of hyoscyamus, were occasionally administered, with the view of allaying the cough and pain in the side; which latter, however, had never been very considerable at any time during her illness. She expired about one month from the time of my first visit, and four months from the commencement of her disease.

The examination post-mortem was made the following day. The left lung was firmly adherent throughout by means of thick cartilaginous false membranes, so that it was exceedingly difficult to remove it from the cavity of the thorax. When incised, it presented a smooth surface, having a cerebriform appearance, here and there interspersed with small portions of gray pulmonary matter, and readily breaking down under the slightest pressure of the finger. The centre of the lung was extensively ulcerated, so as to form a large cavity about four inches long and one and a half wide, extending from the middle of the upper to nearly the base of the lower lobe. It was partly filled with an offensive sanies, and did not appear to be lined with a false membrane. Several large bronchial tubes communicated with this cavity, and were filled with the same sanious matter. Owing to the infiltration of soft cancerous matter, the lung appeared to be somewhat increased in size; and yet, during the life of the patient, no distension of the left side had been observed. Several of the bronchial glands were greatly enlarged, and converted into a hard and white homogeneous matter; the right lung was perfectly healthy, as were the other organs excepting the liver, which contained several small patches of what appeared to be medullary sarcoma. The cervical

glands, at the root of the neck on the left side, were somewhat enlarged, but their pathological condition was not ascertained, owing to an unwillingness on the part of the parents to have the body further mutilated.

According to Dr. Williams, cancerous infiltration of the lungs "sometimes presents an appearance intermediate between that of tuberculous and that of hepatized consolidations; and, unless there be portions of the diseased production occurring separately, it might be taken for one or other of these lesions." (*Williams on Diseases of the Chest*, p. 250.) In the present instance, however, I would mention that the peculiar marbled condition of the incised surface of the lung presented an appearance altogether different from tuberculous infiltration or mere hepatized consolidation; besides, the encephaloid matter found in the liver goes to confirm the cancerous character of the pulmonary infiltration. Had any doubt as to the nature of the pulmonary degeneration been entertained at the time of the examination, it might have been subjected to microscopic examination; and it is to be regretted that this precautionary measure had not been adopted. Laennec states that he had never met with interstitial impregnation of the lungs by cancerous matter; and there can be no doubt but that the encysted and unencysted medullary tumors are the most common forms of cancer of the lungs. On the other hand, Rostan states that he has seen many such cases.—(*Dict. de Méd.*, xxiv. p. 63.)

Most authors admit that open cancer of the lung is of exceedingly rare occurrence. Laennec states that, "in all the cases which he had met with of soft cancer of the lungs, death had been produced by suffocation, or some other affection, before the period when anything like phthisical symptoms could have been produced." Stokes considers cancerous ulceration of the lungs as an exceedingly rare occurrence, and of which he had seen but one example; so that the case which I have just reported may be considered as an uncommon instance both of cancerous infiltration and ulceration of the lung. And it is, therefore, to be regretted that the remoteness of the patient and several other unavoidable circumstances should have rendered its history so brief and imperfect.

The diagnosis was attended with unusual difficulty, owing to the absence of any tumor in the mediastinum; and at this time

the physical signs were not altogether so different from those which might present in some cases of tubercular infiltration or chronic pneumonia, as to have excited the suspicion of a cancerous affection. I am not, however, disposed to deny that the true state of the case might not have been revealed to a more accurate observer, by the remarkable flatness on percussion and absence of râle (excepting at the root of the lung), in connection with the peculiar sputa, yellow tint of skin, and unusual extent and locality of the ulceration, as indicated by the physical signs. But, when we remember the exceeding rareness of ulcerated cancer of the lung, it is not surprising that attention was not directed to this affection, notwithstanding the above mentioned peculiarities in the symptoms. Dr. Wm. Stokes, in his treatise on diseases of the chest, has reported a remarkable instance of ulcerated cancer of the lung attended with peculiar physical signs, and yet the true nature of the case was only revealed by the examination *post-mortem*.

Carcinoma of Lungs, Diaphragm, and Stomach.—Mrs. P., aged 51 years, entered the Penna. Hospital on the 6th of December, 1850. She was then suffering with occasional vomiting, epigastric uneasiness, and other dyspeptic symptoms, in connection with considerable emaciation and more or less œdema about the ankles; the above-mentioned symptoms had existed for about two months previous to her admission. The patient remained under the care of Dr. Wood up to March 1st, 1851; during which period her symptoms rapidly improved under the use of half a grain of nitrate of silver combined with the sixth of a grain of opium, administered three times a day. For the œdema of the lower extremities, she had also been using half an ounce of cream of tartar during the day.

On examining the case in the early part of March, the following symptoms presented: Pulse about 90, but feeble; tongue perfectly clean; stomach retentive of both food and medicine; bowels constipated. The emaciation and anæmia were now very considerable; and the lower extremities were in an œdematous condition, whilst at the same time the skin presented a peculiar yellowness, such as occurs in the cancerous cachexia. Pressure over the epigastrium caused some uneasiness, but no tumor of the pylorus could be detected. At this time there was neither cough,

expectoration, dyspnœa, or other symptom of pulmonary disease; and yet, upon ausculting the patient, I found slight bronchial respiration and crepitant rattle at the lower and posterior part of the right thorax; over the same extent the percussion was quite dull. She was now directed to take Ferri carb. (Vallet's) grs. iij, combined with Ext. gentian grs. ij, three times a day; as also Syr. senega ʒss, with Carb. ammonia grs. ij, every two or three hours; her diet to consist of soup and wine whey.

On the 10th of March she complained, for the first time, of oppression; the prostration, emaciation, and œdema had steadily increased; but as yet there was neither cough nor expectoration, whilst at the same time the physical signs clearly indicated that the disease of the lung had greatly increased, the dullness of percussion in fact now extending as high up as the spine of the scapula. The former treatment was continued, in addition to which, however, a blister was now applied over the posterior part of the right thorax.

No notable change occurred until April 1st, when it was evident that serous effusion had taken place into the cavity of the peritoneum, and also that the right lung was completely solidified, as indicated by the increased dullness of percussion and bronchial respiration. From this time her strength gradually failed, but at no time during her illness had she suffered with cough, expectoration, pain of the chest, or apparent dyspnœa. She expired April 9th, about four months from the time of her admission into the hospital, and six months from the commencement of her disease.

The body was examined twelve hours after death. The right pleural cavity contained about a pint and a half of limpid serum, compressing the lower lobe of the lung, but limited above by strong membranous adhesions. The lung itself was in a great measure solidified, and its summit was occupied by an indurated mass about the size of a hen's egg, composed of numerous gray granules, readily breaking down under the slightest pressure of the finger; throughout the lung, and particularly adhering to the inner surface of the pleura, were disseminated numerous flat and opake bodies, closely resembling soft cartilage both in consistency and color, and varying from an eighth to half an inch in diameter. Similar bodies were found in the pleura, which was greatly thickened and firmly adherent throughout. The bron-

chial glands were enlarged and indurated, and filled with the same morbid product. The diaphragm presented a most remarkable appearance; in some parts it was fully half an inch thick, and completely studded and infiltrated with a yellowish-white substance, having the consistency of soft cartilage. The left lung was perfectly healthy, excepting that it contained several small patches closely resembling those in the right lung. Heart and pericardium in a normal condition.

The pyloric extremity of the stomach was in a scirrhous condition and greatly thickened; on its inner surface there was a large fungous growth completely blocking up the orifice; the mesentery and the peritoneum covering the intestines were dotted with innumerable granules, resembling minute globules of fat. The uterus was somewhat enlarged and indurated, particularly at its neck; the kidneys and other organs were perfectly healthy.

The most remarkable feature in the case just narrated was the absence of all symptoms indicative of pulmonary disease, such as pain, cough, expectoration and even dyspnœa; whilst at the same time the physical signs, such as sub-crepitant râle, bronchial respiration, vocal resonance, and dullness on percussion, clearly indicated induration of the lung. Another peculiarity was the complete cessation of all vomiting for about two months previous to death, notwithstanding that the pylorus was in a great measure obstructed by a cancerous mass. It is also worthy of observation that this mass had entirely escaped detection during the life of the patient, owing, no doubt, to the tympanitic distension of the abdomen.

In this case the cancerous matter occurred in the form of disseminated tubercles, and, as is usual under such circumstances, was in a great measure latent. According to some pathologists, this form of cancer seldom becomes complicated by inflammation of the adjacent tissues; in the present instance, however, the reverse of this appears to have been true, and it was only by a knowledge of the pneumonic inflammation, associated with the cancerous cachexia, that a correct diagnosis was formed in the case.

When, however, the entire lung, or a large portion of it, is occupied by encephaloid matter, it has been supposed that a direct diagnosis of this condition might be obtained, quite independent of any external cancer or of the presence of the cancerous ca-

chexia. Much importance has been attached to a varicose state of the superficial veins of the thorax as indicating a cancerous condition of the lung, provided this enlargement of the veins could not be accounted for by empyema or some other obstructing cause. In one instance, Dr. Stokes was greatly aided in making a correct diagnosis, by the peculiar character of the expectoration, which closely resembled "black currant-jelly," and appeared to be formed "of pure mucus and pure blood mechanically blended;" excepting in this single instance, however, I believe that the above-mentioned peculiar condition of the sputa has not been observed in cancer of the lungs. Much stress has also been laid upon certain signs and symptoms as being especially characteristic of the cancerous degeneration, such as excessive flatness of percussion with absence of râle, and total freedom from fever or other indication of the more common inflammatory affections, such as pneumonia and pleurisy; but how often do we find the cancerous affection complicated and more or less masked by empyema, serous effusion, or pneumonia? In three out of the four cases which have just been narrated, one or other of these affections existed. When the mediastinum is occupied by a cancerous tumor, with or without a similar degeneration in the lungs, the diagnosis is attended with comparatively little difficulty: the violent difficulty of breathing—coming on in paroxysms, as in case of angina—in connection with dysphagia, pain in the shoulder, œdema of the face and arm, and more or less difference in the pulsations of the arteries of the two sides, all indicate pressure upon the important parts contained in the mediastinum; whilst at the same time the dullness on percussion over the upper part of the sternum, together with the occasional appearance of a solid swelling at the root of the neck, show clearly that some firm mass occupies that region; and it now only remains to ascertain the character of the tumor. Occasionally the cancerous growth, by receiving the direct impulse of the aorta and its large vessels, may have a visible pulsation. In the two cases which have fallen under my observation, no kind of pulsation was detected, and even in those cases where it is said to have occurred, it has been exceedingly limited in comparison with the extent of dullness. A bellows sound, caused by the compressed condition of the large blood-vessels, is a much more constant attendant; but it in no wise resembles the whizzing

sound of an aneurism. According to Hope, "pulsating glands or other tumors in the anterior mediastinum are not attended with the aneurismal sound, or only in a slight degree; no impulse and tremor are felt above the clavicles; and symptoms of a disturbed circulation either do not exist at all, or do not correspond in severity with the magnitude of the apparent disease."

Scrofulous tumors, or enlarged bronchial glands, might also be occasionally confounded with cancerous degenerations of the same part. In several instances I have known tumors of this kind to give rise to dullness on percussion at the top of the sternum, attended with symptoms of oppressed breathing and obstructed circulation, whilst at the same time the glands at the root of the neck were greatly enlarged. Such cases, however, it must be confessed, are exceedingly rare, and can generally be recognized by other indications of the scrofulous diathesis. In the case of the young man just reported, the necrosis of the alvéoli, curved spine, and chronic pleurisy, were considered as strong indications of scrofula, and yet the examination post-mortem fully proved that the tumor of the mediastinum was of a cancerous character. Had this patient presented the usual appearances of the cancerous cachexia, such as the peculiar yellow tint and œdema, and more especially, had cancerous tumors declared themselves in other parts, the malignant character of the intra-thoracic tumor might readily have been recognized during his life.

A proposition (24) for Fellowship was presented.

Stated Meeting, June 3d, 1851.

Dr. WOOD, President, in the chair.

Present, thirty-two members.

HENRY E. DRAYTON, M. D., was duly admitted a Fellow.

The Library Committee reported that they had received from the Sydenham Society, of London, Rokitansky's Pathological Anatomy, vol. iii.

The Committee on Distribution of the Pharmacopœia reported in part, and were continued.

The President announced that he had appointed the Standing Committees as follows:—

Library Committee.—FRANCIS WEST, WILLIAM PEPPER, JOHN J. REESE.

Committee on Meteorology and Epidemics.—W. J. W. RUSCHENBERGER.

The Secretary announced that, since the last meeting of the College, two of the Fellows had deceased: Drs. WILLIAM B. WILSON and SAMUEL G. MORTON.

Dr. PARRISH was appointed to prepare a biographical notice of Dr. Wilson, and Dr. WOOD, a similar notice of Dr. Morton.

The Treasurer presented his Annual Report, which was referred to the Censors.

Dr. BEESLEY related the

Outlines of a Case of Disease terminating in Death, which occurred subsequently to Parturition, with the Appearances detected upon a Post-mortem Examination.

For the last three or four months Dr. Beesley had met with several cases in which females, on the third or fourth day sub-

sequent to parturition, had experienced a severe pain in the lower portion of the abdomen, with tenderness upon pressure, and distension of the abdomen from flatus; the pulse was frequent and contracted, and in general there was a severe febrile attack. These cases generally recovered. One case, to which he desired to call particular attention, occurred in a young woman, twenty years of age, after the birth of her first child; she had previously always enjoyed good health. The labor was a very severe one; before the os uteri was fully dilated, the patient was attacked with symptoms of severe febrile excitement. Twenty ounces of blood were taken from her arm, which operation produced great relief. She was then put moderately under the influence of ether. Subsequently to the birth of the child, she was much prostrated, and after the placenta came away profuse hemorrhage occurred, which produced faintness, sinking of the pulse, &c. Ergot was immediately administered, ice was applied to the abdomen, and pressure upon the descending aorta. There was an entire indisposition in the uterus to contract. To sustain the patient's strength, small portions of brandy were administered at intervals, and every means were taken to bring on contraction of the womb. It was full two hours and a half from its first occurrence before the flooding was completely arrested, and even then the uterine parietes remained in so relaxed a condition that, during the ensuing two hours, there was imminent danger of its recurrence. Next day the abdomen was tender to the touch, and distended. Warm fomentations were directed, with calomel, followed by a laxative; and after the bowels were freely opened, Dover's powder was administered, and a nourishing diet. There was no recurrence of the hemorrhage, but a discharge took place from the uterus of putrid coagula, followed by a purulent discharge having a very fœtid odor. The vagina was directed to be well syringed with tepid water daily. After the lapse of a few days, Dr. Huston saw the patient in consultation. She now labored under a constant tendency to flatulence and diarrhœa; a gradual improvement in the general symptoms of her case had taken place, but for six weeks the tenderness and distension of the abdomen and frequency of pulse still continued; there was also considerable tenderness in the region of the left ovarium. After imprudently partaking of peas and potatoes, the patient experienced an increase of the pain and distension of the abdomen, attended with extreme irritability of stomach, and con-

siderable febrile excitement. Magnesia and rhubarb were administered, and warm fomentations and spirit of turpentine were applied to the abdomen externally. The local tenderness and febrile excitement abated, but the frequent pulse and tympanitic distension continued. At the end of a week vomiting of bile and of great quantities of a serous fluid occurred; the patient lost strength, and gradually sunk. Death took place at the termination of two months subsequent to her confinement.

The post-mortem examination was made by Dr. Levick.

The coats of the colon were very much thinned and softened; the small intestines were contracted; there were no evident marks of inflammation in the tract of the intestines, excepting for about two inches in the neighborhood of the ileo-cœcal valve. The mucous coats of all the intestines were softer than natural. Behind the uterus and exterior to it, there existed an abscess of considerable size, and two smaller ones between the uterus and bladder. The uterus had become contracted to its proper size. The liver was pale, and exhibited somewhat the nutmeg character. The spleen was natural in appearance. The stomach was pale and softened. Its mucous membrane was almost pultaceous. The duodenum was in the same condition; in an attempt to lift the mass of intestines, the duodenum was torn across. There was rather less softening of the remaining small intestines. The colon was distended with flatus and a bilious fluid. The left ovary was somewhat enlarged, and contained a hydatid. The cavity of the uterus presented no indications of disease.

Case of Hermaphroditism. Read by Dr. NEILL.—A black subject was brought into the anatomical rooms of the University, in February, 1850, which is certainly entitled to the term hermaphrodite.

She dressed as a female, and was apparently twenty-five or thirty years of age, judging by her teeth and general appearance. Very little information could be obtained concerning her habits and propensities. She resided among the degraded blacks in the lower portion of the city, and died from drunkenness and exposure, according to the verdict of the Coroner's jury.

From a superficial view of the pelvis and genitals, almost any one would have pronounced the subject to have been a *hypo-*

spadic male, notwithstanding the large mammæ and the want of hair upon the face.

The breadth of the shoulders compared with the narrowness of the hips, and the form and development of the limbs would, alone considered, have indicated the male sex.

By referring to the lithograph, No. 1, it will be seen that the representative penis was five inches in length, and one inch in diameter; and that the skin, prepuce, glans, corona, fossa navicularis, and orifice of the urethra presented an appearance like that of a penis. But by lifting up or turning aside the penis, Fig. 2, it was found that the fossa navicularis was split, and that the urethra was wanting. In the place of the urethra there was a groove reaching from the glans penis to an oblique opening in the perineum. The cuticle lining the groove was thin and shining; it was also deficient in pigmentary cells. On each side of this groove there was a fold of skin commencing near the middle of the side of the penis, and stretching around the perineal orifice. The interior of this fold showed it to be the analogue of the nymphæ or corpus spongiosum.

The perineal opening was the commencement of a passage common to the bladder and vagina, and its diameter was equal to that of a common sized catheter, although the orifice appeared much larger, owing to its obliquity.

The scrotum existed upon one side only. It was corrugated with transverse rugæ, and covered as usual with hairs and sebaceous follicles. To the touch it gave the idea that it contained two hard bodies.

Internal Organs.—These were completely female, though not perfectly developed. The dissection was commenced by opening the abdominal cavity, and the contents of the pelvis were examined in connection with the external parts.

The bladder was natural in position and size. There was no prostate, and the urethra was about one inch in length, and opened into the perineal passage.

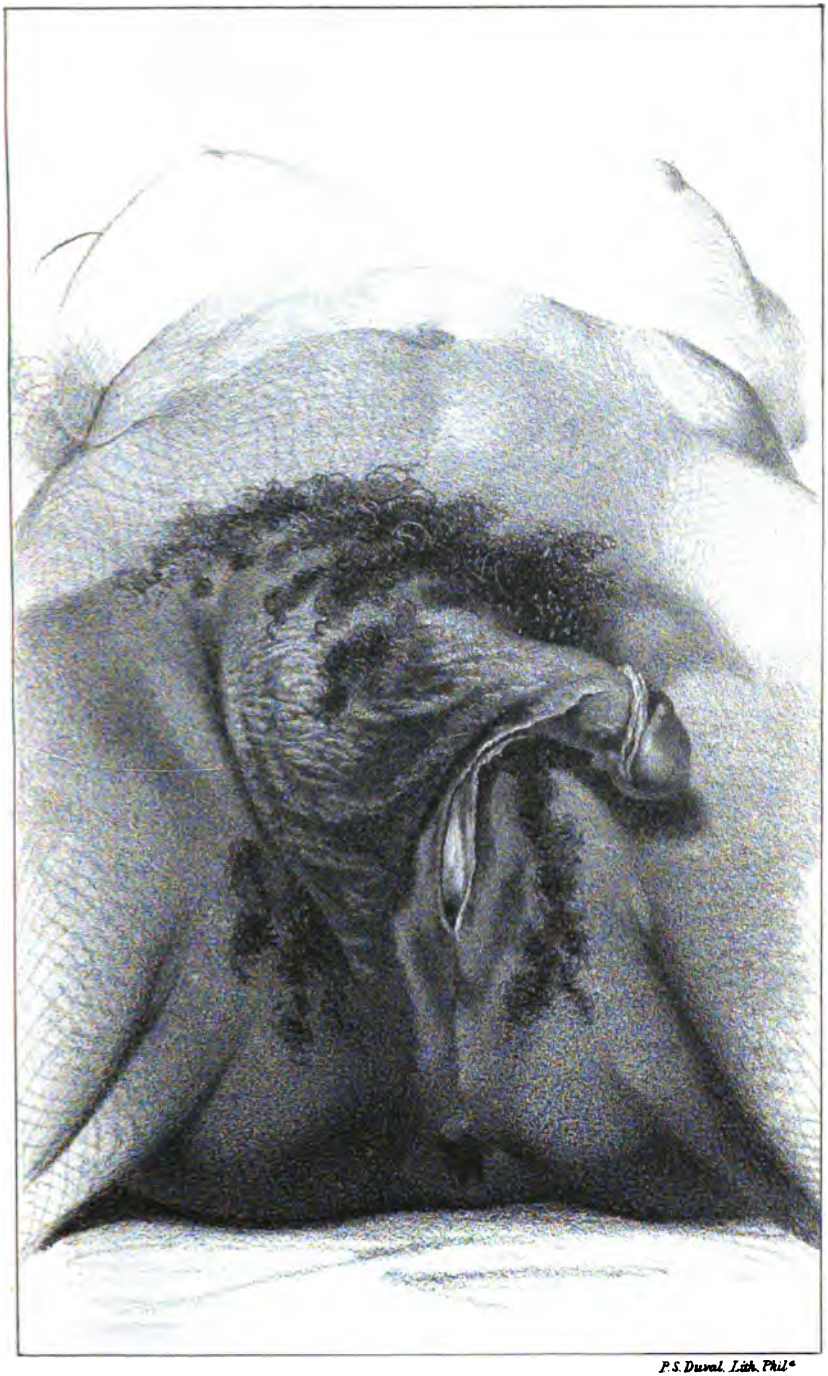
The uterus was small, but symmetrical; to its sides were attached the broad ligament, holding it in its proper relation to the rectum and bladder.

The Fallopian tube of the right side had no free and fimbriated extremity, but terminated in a sac which was adherent to the ovary.

N°. 1.

P.S.Duval, Lith. Phil.a

N°2.



P.S. Duval. Lith. Phil.ª

The ovaries were small, spherical, and corrugated; a section exhibited the usual fibrous tissue and vesicles.

The right round ligament of the uterus was exceedingly thick, and appeared to be muscular; but, upon examination with the microscope, it was found to be composed of white and yellow fibrous tissue. It reached to the bottom of the scrotum, where it was firmly attached.

The *scrotum* contained an irreducible omental hernia, probably congenital. The hernial sac contained also a small hardened mass, which was supposed to be a representative testicle, but it contained no true glandular structure or excretory tube.

The vagina was of the proper length, but extremely narrow, especially where it approached the perineal orifice.

The above case would be classified under the head of "*spurious hermaphroditism*" in the female, according to Professor Simpson's article on this subject, in the Cyclopædia of Anatomy and Physiology.

REPORT ON THE PATHOLOGICAL CABINET. BY DR. NEILL, CURATOR.

Since the last report, the following specimens have been received and prepared:—

No. 68.—*Rupture of the Gall-Bladder.*—Presented by Dr. H. Hartshorne.

Dr. Hartshorne has also furnished the following history of the case:—

"Mrs. Moore was 55 years old. She had been for many years liable to occasional attacks of bilious colic with ordinary symptoms. I attended her in two of these, at intervals of several months, in the two or three years before her last attack.

"She sent for me on the 16th of this month, complaining of violent pain throughout the abdomen, and vomiting. She said she had been *costive*, and *somewhat* indisposed for two or three weeks, without being really sick.

"She had taken a laxative enema, which had operated two or three times. The vomiting was bilious, and not very frequent. Magnesia, with paregoric and ammonia, was prescribed, and

mustard applied externally. I directed also pills containing Hyd. chl. mit. gr. ¼, P. opii gr. ⅛, P. rhei gr. ij, one every two or three hours. These were followed by a carminative mixture, taken at short intervals, and in a few hours she was much relieved. She slept tolerably, and through the 17th had very little pain. A very *distressing* sensation, however, remained in the region of the liver. I advised citrate of magnesia to open the bowels, but a whole bottle of this failed to act. In the evening, all her pain returned as severely as ever, but without nausea or vomiting. Considerable gaseous distension of the abdomen existed, which I supposed to be within the bowels.

"Late that night, finding that repeated injections containing castor oil, &c., came away at once without effect, and that the suffering increased without any hope of evacuation, I gave her, at intervals of an hour each, three drops of croton oil in pills. They did not nauseate her at all; but still did not open the bowels. Her pain was now *extreme;* I never saw any one appear to suffer more. There was great *tenderness* on pressure or motion also. To palliate this pain, I gave, in successive doses, altogether, about a teaspoonful of laudanum, and a similar amount of chloroform. Comparative ease was thus at last obtained.

"The bowels being still obstinate, she took *castor oil*, a tablespoonful at a time, twice in three hours, and, after this, ten grains of calomel with ten of rhubarb; *besides, also, three drops more of croton oil;* but still without any operation.

"Dr. Samuel McClellan was now called in consultation, and advised the repetition of the castor oil, with the addition of fifteen drops of *Ol. Terebinth.* in each dose; and, also, a large blister over the abdomen, left on but five hours. At his second visit, on the morning of the 19th, he recommended a pill, containing two grains of blue mass and one-half grain of rhubarb, to be taken every three hours, and approved of discontinuing the oil by the mouth, but giving it still by enema. The state of her pulse and skin, also, had induced us to administer wine-whey since the previous evening.

"About noon on the 19th, a pint or more of fluid, containing some natural feces, was passed in several evacuations, occurring some time after injection. Her skin, however, was cold and clammy; face cadaverous; pulse quick and thready; in brief, in

spite of the most active stimulation, she sank away, suffering now also with renewed vomiting, and died at about 6 P. M. Her whole illness, then, lasted but a little over four days.

"From the *very great* resistance of the bowels to purgatives, I had *expected* some intestinal obstruction, as introsusception or concealed and strangulated hernia. Perhaps rupture of the gall-bladder may be the *undiscovered* cause of death in a number of similar cases in which no autopsy is made."

The *autopsy* was made by the curator, with the assistance of Dr. Levick, in the presence of Drs. E. Hartshorne, H. Hartshorne, and Kennedy.

Upon opening the cavity of the abdomen, the intestines were found to be slightly agglutinated to each other, and to the parietes of the abdomen, by a recent fibrinous exudation. This exudation was more abundant in the right hypochondriac region, where it was sufficiently tenacious to retain, between the convolutions of the intestines and the liver, a large amount of dark-colored fluid, which was found to have escaped from a small opening in the right side of the gall-bladder.

The peritoneum was highly injected, both at its visceral and parietal portions.

When the gall-bladder was removed and slit open, its mucous membrane was almost entirely covered with an adherent laminated deposit of the same character as that which composed the gall-stones, of which there were twenty-two, and two of them were quite large. A gall-stone of the size of a pea was found impacted in the cystic duct, where it still may be seen in the preparation.

The mucous coat presented two cicatrices with radiated ridges, but there were no corresponding cicatrices upon the external surface. Besides these cicatrices, there was also an ulcer of seven lines in diameter, the bottom of which was perforated by a small opening of one line and a half in diameter, through which the gall-bladder had been emptied of a large portion of its contents.

The external surface of the gall-bladder around this orifice was infiltrated and stained with bile, giving rise to the idea of rupture; for, if the opening had been entirely due to the ulceration, the external and internal opening would have been nearly of

the same size, and there would have been no infiltration of the tissue around the orifice.

It is more than probable that the symptoms which first occurred in this case arose from the arrest of a gall-stone in the cystic duct, and that the vomiting produced the rupture of the parietes of the gall-bladder, which had already been thinned by ulceration.

This specimen, though a rare one, is by no means unique. Rokitansky* speaks of the irritation of biliary calculi producing inflammation, ulceration, and perforation of the gall-bladder followed by fatal peritonitis. Gross† also, in his *Pathological Anatomy*, says: "Ulceration of the gall-bladder generally begins in the internal coat, being usually caused by the irritation of biliary calculi."

Dr. Rogers reports a case, in the *Western Journal of the Medical and Physical Sciences*, of rupture of the gall-bladder, in which the patient survived the escape of the fluid sixty hours. Professor Drake reports another, in the same journal, in which death took place at the end of the third day.

No. 69. *Gall-Stones from the above case.*—Presented by Dr. H. Hartshorne.

No. 70. *Degeneration of the Liver, and Hypertrophy of the Gall-Bladder.*—Presented by Dr. Keller.

This specimen was accompanied with the following description:

"*Partial degeneration of the liver into a mass of cellular tissue, with general hypertrophy of the gall-bladder, the canals of which were obliterated, and which contained two large gall-stones of the weight of* 13½. *Morbid growth in the cavity of the womb, and cyst formations in the left ovary. Tubercular depositions in the cellular tissue surrounding the large vessels on the lumbar vertebræ.*

"A lady, native of Philadelphia, aged 70, who had enjoyed perfect health all her lifetime, complained, about four months before death, of intense pains, of a bearing down character, in the lower part of the abdomen, and near the sacral region of the back. A few days before death, the abdomen swelled consider-

* Vol. ii. p. 159, Syd. Soc. † Gross, Path. Anat. p. 668.

ably, and the bowels remained obstinately closed. She never complained of any pain in the region of the liver, which proved, at the post-mortem that I was requested to make by the attending physician, to be the seat of considerable morbid changes.

"*Post-mortem examination.*—The body was thin and the face pale; it did not show by its expression any suffering of long standing, nor by its color any cancerous disease. On opening the thorax, the lungs and heart were in a perfectly healthy state. The lungs were infiltrated, particularly towards the back, with blood and serum. The heart contained, besides blood, in its cavities, some strings of coagulated fibrin. The liver was considerably enlarged. The parenchyma around the gall-bladder, which projected far beyond the lower edge, was changed into a white hard mass, which showed on its surface a number of smaller blood-vessels. On cutting into it, it was soft like cellular tissue, and had not the hardness of scirrhus. On pressing it, there appeared on the cut surface a white cheesy mass. The parenchyma itself was engorged with dark blood, and contained several grayish tumors the size of a walnut. The gall-bladder had attained about three times its normal size, and formed, as the gall-duct was obliterated, a closed sac. Its walls were thickened, and it contained two large gall-stones, which, united, had an ovoid figure. The larger of the two, washed and dried, weighed 9$\frac{1}{2}$3, the smaller one 4$\frac{1}{2}$3. They were of a brownish-yellow color, only in some spots perfectly white, and covered with a white film on their surface. No gall was in the gall-bladder. Spleen normal. Kidneys, full of blood and fragile, showed the urinary tubules in the cortical substance, which had a perfectly smooth surface. The intestinal canal was filled with greenish-brown fecal matter. The tissue of the uterus was white and firm, and had on the surface of its cavity many small clear vesicles of the size of millet seeds. Near the termination of the left Fallopian tube was a tumor, the size of a nut, and consisting of a cellular stroma in which there were a great number of clear vesicles, the size of a pea, very similar in their appearance to the ovula Nabothi. The whole mass was fastened by pedicles to the surface of the womb. On cutting it, a clear tenacious fluid flowed. The left ovary was atrophied, the right one had been converted into one large and several smaller cysts. The large one was the size of a fist, with thin walls, and contained,

like the others, a thin clear liquid. On the lumbar vertebræ, in the cellular tissue surrounding the large vessels, were eight or ten whitish-gray tubercular deposits of the size of a hazelnut.

"Through microscopic investigation, I found the gall-stones, consisting of cholesterine, mixed with dried gall. The white substance surrounding them was small and large round cells, without nuclei, mixed with cholesterine, globules of fat, and molecules of different sizes. The membrane which formed, in this case, the hypertrophy of the gall-bladder, proved to be cellular tissue. The above-mentioned white structure, which invested the gall-bladder, and had, for an inch in circumference, taken the place of the substance of the liver, consisted of cellular tissue and round cells without nuclei, and which were not changed by the application of acetic acid. Diffused through it

Fig. 1.

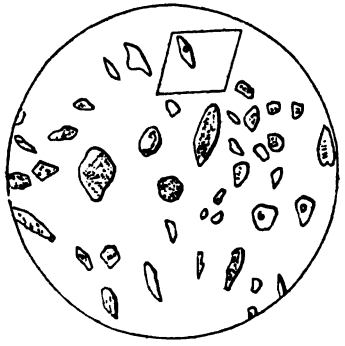
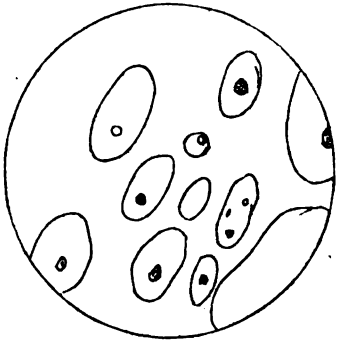


Fig. 2.



were unorganized bodies of various sizes, globules of fat, crystals of cholesterine, and here and there the pigment of galls. The walnut-sized depositions in the substance of the liver had quite a similar composition, only the cells, which were also without nuclei, had an oblong shape, and did not show the collapsed appearance of the others. The stroma of the mass and pedicle in the uterus consisted of areolar tissue. The liquid, which I observed on cutting it, showed under the microscope a number of cells of different sizes; the smaller ones were of the size of common fat cells; the larger ones, however, covered the whole field of the microscope at 220 diameters. The smaller ones showed distinct nuclei, whilst in the larger ones they had dis-

appeared. These cells were perfectly transparent, and would have developed themselves, doubtless, into the mentioned clear cysts. These cells are—with the exception of those which I saw last winter in a tumor of the gum, in a child ten years old, which, after extirpation, returned, and which Henle, taking them from a scirrhous tumor of the upper jaw, describes under the name of Schachtel cells (v. *Handbuch der Rationelle Pathologie*, 1847, Tab. 2, Fig. 26, *a*, *b*, *c*)—the largest ones I have observed in the human body. These very peculiar cells, however, contain a great number of young cells, and, notwithstanding they are first oval, they branch out afterwards, by which they acquire a different shape and belong only to malignant tumors, whilst the cells in question are very simple cells, and lose, by a greater development, even their nucleus, and can on that account alone be considered non-malignant cells. The grayish-white masses in the cellular tissue of the lumbar vertebræ consisted only of tubercular mass mixed with small round cells similar to pus-corpuscles.

"Although Rokitansky mentions four kinds of cancer occurring in the liver—1, areolar cancer, of which he knows only one case; 2, carcinoma fasciculatum (hyalinum); 3, medullary cancer; 4, cancer melanodes—and our described case would be considered, according to his division, in part as an areolar cancer and in part as a medullary cancer; yet, from a close examination of the case in every respect, I think it cannot be considered as a cancer: 1, from the total absence of a general cancerous disease; 2, from the comparatively healthy state of the blood; 3, from the microscopic appearances of the tumor in the womb, which showed not the least cancerous formation; and, 4, from the degeneration of the liver itself, which did not contain a single nucleated characteristic cancer cell. If we were even to admit, with Professor Bochdalek, of Prague (*On the Healing Process of Cancer of the Liver*, 1845), that we have retrograding cancer, there is, in this case at least, no probability, as the microscope did not furnish the least evidence. Nor can it be considered a tubercular disease of the liver, notwithstanding the cells resembled tubercular corpuscles, as most of them had been organized in cellular tissue, which cannot occur in tubercles.

"Therefore, I cannot consider it a cancerous, or tuberculous

disease of the liver, but a simple degeneration of the liver into cellular tissue, which has up to this time always been described as cancer of the liver."

No. 71. *Very large Gall-stones.*—Presented by Dr. Keller. These were removed from the gall-bladder described in connection with No. 70. They seem to be parts of the same stone, the length of which was three and a quarter inches.

Stated Meeting, July 1st, 1851.

Dr. WOOD, President, in the chair.

Present, thirty-nine members.

BERNARD HENRY, M. D., was duly admitted a Fellow.

The Censors reported that they had compared the account of the Treasurer for the year ending June 5th, 1851, with his vouchers, and found the same correct.

Agreeably to the provisions of its Charter, the College proceeded to an election of officers for the ensuing twelve months, when the following were duly elected:—

PRESIDENT.

GEORGE B. WOOD, M. D.

VICE-PRESIDENT.

CHARLES D. MEIGS, M. D.

CENSORS.

HENRY BOND, M. D.
J. WILSON MOORE, M. D.
SAMUEL JACKSON, M. D.
GEORGE W. NORRIS, M. D.

SECRETARY.

D. FRANCIS CONDIE, M. D.

TREASURER.

J. RODMAN PAUL, M. D.

CURATOR.

JOHN NEILL, M. D.

The following donations to the Library were received:—

The American Journal of the Medical Sciences, for July and Oct., 1850, and Jan. and April, 1851. From Dr. HAYS.

The Medical News, for the year ending June, 1851. From Dr. HAYS.

The Reports of the General Board of Health, of London. From Dr. M'CLELLAN.

Dr. WEST, on behalf of the Library Committee, presented its annual report.

The Committee state, that nothing of especial interest or importance in reference to the subjects upon which they were required to report, had transpired during the year just concluded.

The plan adopted by the College, at the suggestion of the Committee, with the view of rendering the whole of the works embraced in the library at all times accessible to the Fellows, and at the same time of insuring their safety, continued, it is believed, to work well.

The attention of the Fellows is again called to the express prohibition enjoined against the removal from the chamber of the College, of any bound book, or of any periodical or pamphlet, without the permission of the Library Committee or Librarian; it being impossible for either the committee or librarian to be responsible for the safety of the property entrusted to their care, unless this prohibition is strictly adhered to.

During the past year, the library has received several valuable additions, chiefly derived, as has heretofore been the case, from the liberality of the Fellows, and the medical authors of our country. The "Sydenham" publications still continue to be regularly received, as, also, the principal professional journals of the United States, either in exchange for the Summary of our Transactions, or as donations from the editors.

The Committee would have been pleased, had it been in their power, to congratulate the College upon a much greater augmentation of the library than is exhibited by the present report, as well as upon the increased demand for the books it contains on the part of the Fellows; they believe that, were more use made of the library than has heretofore been the case, it would be a means to secure its more rapid extension.

The following proposed amendment to the Ordinances was presented:—

To add to *Section* 7, *Chapter* II. of the Ordinances, the following provision:—

"And if he shall neglect to pay his contribution for six months after it has become due, an addition of fifty cents shall be made thereto."

The following communication was presented and read:—

Lemon Juice as a Remedy in Rheumatism. By Dr. WILLIAM PEPPER, one of the Physicians of the Pennsylvania Hospital.

During the last few years, several new methods for the cure of rheumatism have been urged upon the attention of the profession; and when we refer to the very respectable sources from whence these different plans have emanated, it is surely our duty to pursue such investigations as may in the end enable us to decide upon their respective merits. This is particularly true in reference to a disease which has ever been considered the opprobrium of medicine, and which, at the same time, is of so common occurrence that we are almost daily called upon to witness its sad effects. The fact, too, now so well known, that rheumatism is particularly prone to settle upon the valves of the heart, and thus lay the foundation of incurable organic disease, is an additional reason for paying especial attention to every suggestion in regard to the treatment of this painful affection. From the above considerations, it may not prove uninteresting to refer briefly to some of the numerous plans which have recently been recommended for the treatment of this disease, before passing to the special subject of the present communication.

The belief that rheumatism was nothing but an inflammation of the fibrous structure has induced many to rely exclusively upon the antiphlogistic plan of treatment; and hence general and local dépletion have been brought into free requisition; this system, however, has now been fully and fairly tried without realizing the sanguine expectations of its advocates. Bouillaud, the most enthusiastic supporter of venesection, contended that in nearly every instance the disease could readily be subdued by bleeding, *coup sur coup;* but, from recent disclo-

sures, it would appear that the above-named author stands almost alone, even amongst his own countrymen, as the advocate of this treatment. Quite recently, and, as it were, in direct opposition to the plan just noticed, quinia, in large doses, has been recommended by Briquet, Trousseau, and others, as a prompt and safe remedy for rheumatism, and appears to have been first used in this disease on account of some supposed resemblance between it and certain periodic affections; but here again, further experience has shown that this remedy is more or less hazardous in the inflammatory forms, and even its most strenuous advocates admit the expediency in many instances of preceding the use of the quinia by bleeding from the arm, particularly in plethoric subjects, or when complicated by acute inflammation of the membranes of the heart. Nitre, in large doses, has also been esteemed an extremely valuable and efficacious remedy in this disease, and among its advocates may be numbered Martin Solon, Gendrin, Bennet, and other distinguished names. By some, its efficacy is ascribed to a peculiar sedative influence on the circulation; whilst, by others, it is supposed to eliminate the *materies morbi*, through its diuretic and diaphoretic properties. In many instances, however, it produces no apparent effect upon the progress of the disease, and already, in a measure, is it falling into disuse; from the numerous reports in its favor, however, it certainly merits further investigation, particularly as no injurious effects have resulted from its use when largely diluted. We next hear of the phosphate of ammonia as a specific for gout and rheumatism. Dr. Buckler, the originator of this treatment, believes that the blood in rheumatism contains an excess of lithic acid in combination with soda and lime, and that the phosphate of ammonia decomposes these salts, converting them into the phosphate of soda and lithate of ammonia, both of which are soluble and capable of being readily eliminated by the skin and kidneys. The theory was certainly very ingenious, and, as it appeared to be sustained by numerous recorded cases, I was induced to try it in several instances of severe rheumatism admitted into the hospital, without, however, obtaining any very satisfactory results; the number of cases, it is true, was perhaps too limited to enable me to arrive at any very positive conclusion. Since then various results have been obtained by different observers,

some of which were favorable and others adverse to the new treatment; but from the fact that this remedy is now but little used in rheumatism, I am the more disposed to believe that my first impressions were well founded. Dr. B. Todd advocates what he calls "the treatment of elimination," consisting chiefly in the administration by opium, ipecacuanha, and nitre, with the occasional use of mild alkaline purgatives. This practice is based upon the supposition that lactic acid constitutes the "materies morbi" in cases of rheumatic fever, and that, therefore, the chief indications are to neutralize this acid, and, at the same time, to promote its elimination from the system through the different emunctories, as the skin, kidneys, liver, and alimentary canal. The above-named author is of the opinion that most of the remedies which prove beneficial in this disease owe their efficacy to this principle; colchicum, even, which by some has been esteemed as much a specific in rheumatism as quinia in intermittent fever, is by him considered inert, excepting when given in laxative doses. For my own part, I am fully convinced, from repeated observations, that colchicum, combined with magnesia, in purgative doses, in connection with the free administration of Dover's powder, will in most instances afford great relief, and not unfrequently even effect a prompt and permanent cure; as to the precise manner, however, in which these different means produce a favorable result, doubts may well be entertained until the pathology of rheumatism shall have been more fully established than at the present time. Whilst we are fully prepared to admit that the application of animal chemistry to the investigation of disease must ultimately lead to a knowledge of the true pathology and consequent rational treatment of many affections which are now admitted to be the opprobria of our profession, we still believe that the application of the numerical system to a large number of carefully observed cases can never be safely dispensed with, particularly in a disease like rheumatism, where so much patient and impartial observation is essential for the formation of just conclusions.

The above brief sketch of the several plans recently recommended for the treatment of this affection has been made, not with the view of disparaging these different systems, or of even questioning the perfect sincerity of their originators or advo-

cates, but simply with the design of showing the great difficulty of fully appreciating the effects of our therapeutic agents in a disease so constantly vacillating as the one under consideration. Most physicians must have observed the remarkable ameliorations which occasionally occur in the symptoms, even when nothing but an "expectant" treatment has been pursued; and this is especially true in regard to the acute forms in which most of the above plans have been considered so decidedly useful. Atmospheric influences and constitutional peculiarities have no doubt frequently produced those results which have been too hastily ascribed to medicinal means.

Let us now inquire whether the lemon-juice treatment, so much in vogue in Great Britain at the present time, is more entitled to consideration than the plans to which we have already alluded. Dr. Rees, with whom this treatment originated, was induced to try the vegetable acids in rheumatism, under the impression that the excessive quantity of oxygen entering into their composition might, with the elements of water, convert lithic acid into urea and carbonic acid, and thus correct the rheumatic diathesis; his only reason for preferring lemon-juice to the other vegetable acids was its more agreeable taste; and he appears to have attached but little or no importance to the alkaline citrate which it contains. Dr. Golding Bird, on the other hand, conceives that the efficacy of the lemon-juice depends altogether upon the citrate of potash, which, by decomposition during digestion, yields an alkaline carbonate to the blood, and thus promotes elimination by the kidneys; he states that he has obtained the same good effects from cream of tartar or acetate of potash, and more especially the latter, which even acts with "marvellous rapidity." This treatment is said to be particularly applicable to acute rheumatism, and more especially in those cases where the large and small articulations are inflamed; under such circumstances the acid appears to act as a prompt arterial sedative, the pulse rapidly falling from 120 to 75, or even lower; whilst, at the same time, the pain is quickly relieved, as though from the effects of an anodyne. In the subacute and chronic forms, the same good effects have not been observed; but even in such cases this plan is said to bear a favorable comparison with the old methods of treatment.

Having no preconceived views to support, and considering the

theory of the action of this new remedy as of but little moment in comparison with its reported utility, I was induced to test its efficacy in a number of cases of rheumatism which were admitted into the hospital during my last term of duty. In reporting the following, I shall not weary the College by minute details, but will be as brief as is consistent with accuracy, confining my remarks in a great measure to the leading facts in each case.

CASE I.—Brien, a sailor, aged twenty years, was admitted into the hospital April 25th, 1851. For the last three days he had been suffering with acute inflammatory rheumatism, affecting the large and small articulations, which were red and swollen. The action of the heart was tumultuous, but without bellows sound or other indication of cardiac disease; tongue furred, skin hot and moist, pulse frequent. The only treatment prescribed was a tablespoonful of lemon-juice, with the same quantity of water and a little sugar, to be taken four times a day. On the 26th he was suffering much pain, and had passed a sleepless night; the fever also continued, and he appeared in no respect relieved.

27th. This morning there was a great diminution of the pain and fever, and he had slept well all night; a slight bellows murmur could now be heard, but unattended by dullness of percussion or other evidence of effusion into the pericardium. From this time his improvement was rapid, and by May 2d he was up and about, apparently quite well. On the sixth of the same month, or eleventh day after admission, he was discharged *cured.*

Excepting a single laxative dose of rhubarb on the 29th of April, nothing but the acid was administered throughout this case, and yet the patient was much relieved in two or three days, and perfectly well by the end of the week.

CASE II.—Orr, a young girl, aged about fifteen years, entered April 20th, suffering with acute rheumatism, involving the ankles, hips, and knees, but uncomplicated by cardiac symptoms; nor was there much fever. She entered on the fourth day of the attack, and was immediately put on the exclusive use of lemon-juice, as in the last case. In two or three days there was a manifest improvement, the patient sleeping well, and suffering

comparatively but little. On the 24th and 25th there was still a progressive improvement; she, however, remained in bed, and was kept upon soup diet. By the 26th she was up and dressed, and by the 28th, or about one week after her admission, she appeared perfectly well, and was discharged on or about the 2d of May.

In this case the symptoms were not so violent as in the former, and, as the pulse was but little accelerated, no marked reduction in its frequency was observed during the treatment, nor was there any excessive flow of urine.

CASE III.—Stewart, a young woman, aged about twenty-three years, entered the hospital April 14th, suffering with severe rheumatic pains in the back and knees. She had been sick four days before admission, and stated that two years ago she had a somewhat similar attack, which lasted about ten days. The lemon-juice was directed as usual, which, in connection with a regulated diet, and keeping the patient in bed, was the only treatment instituted. By the 17th, or third day after entering the hospital, there was a perceptible improvement, and the patient slept well. On the 21st she was up and about, and, to all appearances, nearly well. She was discharged cured on 23d, or just nine days after admission.

In my note of this case I find no mention of the pulse having been reduced in frequency, or of any increased flow of urine having been induced by the use of the lemon-juice.

CASE IV.—A woman, aged about twenty-nine, entered May 4th, laboring under severe rheumatic pains of the shoulders and lower extremities; the small articulations, however, were unaffected. She had been sick seven days before admission, but had not been subject to the disease. Pulse 90, and tongue furred, but she had no very decided fever, nor was there any cardiac complication. In this case lime-juice was substituted for lemon-juice; but on the second day of the treatment the latter was resumed, and given as in the former instances. The sufferings in this case were at no time very severe, and it therefore was difficult to appreciate the slight changes which took place from day to day. The improvement, though gradual, was steady; the pulse fell to its natural standard, the tongue cleaned, and by

the end of two weeks she was evidently convalescent. She was discharged, *cured*, on the 23d of May, or nineteen days after admission.

In this case there was good reason to believe that the patient feigned sickness for several days after relief had been obtained; and, as there was no inflammation of the articulations, constitutional disturbance, or other evidence of disease, we were obliged to trust to her own statements.

CASE V.—McLean, a young woman, aged twenty, entered the hospital May 23d, suffering with acute rheumatism. She had been sick one week previous to admission, during which time she had been using colchicum and lemon-juice, under the direction of Dr. E. Hartshorne; the former remedy, however, had been given with great irregularity, and no kind of mitigation in the symptoms had been experienced up to the time of her entering the hospital. Most of the large and small articulations were red and swollen, and exquisitely painful: tongue coated with a thick, white fur; pulse accelerated—at least 120 to the minute; skin hot, and at times bathed with copious acid perspiration; with the exception of a slight friction sound, there were no marked cardiac symptoms. The lemon-juice was directed as in the former cases, and at the end of forty-eight hours there was a decided improvement. On the 26th, or third day after admission, the pulse had fallen to 60, and at the same time the heat, pain, and swelling had, in a great measure, disappeared. On the 27th the pulse was only 55, and there was a still further improvement both in the general and local symptoms; the friction sound had also disappeared, and the patient had slept well and expressed herself as quite relieved.

June 1st. Pulse remained at 60; tongue clean and moist, and to all appearance she is quite well. The following day the urine was tested by litmus paper, and proved to be neutral; it contained but a small amount of urate of ammonia, and was quite clear; throughout, the quantity had been but moderate. She remained in the hospital up to the seventh of the month without having had any relapse; before leaving, the pulse had risen to 80, showing clearly that it had been previously depressed by the action of the lemon-juice.

CASE VI.—Peabody, a young woman of remarkably healthy appearance, aged seventeen years, entered the hospital May 24th, suffering with severe rheumatism. She had been sick three weeks previous to admission, but had not been subject to the disease. The large and small articulations were all more or less inflamed, and the pain was so severe as to cause her to shed tears; the heart was also involved, as indicated by friction sound, distant bellows murmur, and extensive dullness over the præcordial region; pulse about 100, some heat of skin, and tongue slightly coated. Before coming to the hospital she had been purged and cupped, and had also taken an emetic, without, however, deriving any benefit from the treatment. The lemon-juice was now prescribed, to the exclusion of all other remedies, and at the end of forty-eight hours all the distressing symptoms had disappeared. In this case, too, it was observed that the pulse fell rapidly to 65 or 70 beats in the minute. On the 30th of May, or just six days after admission, she was up and about, and apparently perfectly well; even the cardiac symptoms, excepting a slight bellows sound over the apex of the heart, had entirely disappeared. On the following day she was discharged from the ward, and entered upon her duties as an assistant about the premises.

June 7th. One week after her discharge she had a relapse; but upon this occasion the disease was mild, and rapidly disappeared, in the course of four or five days, under the use of lemon-juice. She left the institution June 11th.

CASE VII.—Gallagher, a lad aged about eighteen, entered the hospital April 24th, suffering with subacute rheumatism of seven months' standing; for the last few days, however, there had been an increase of the pain and swelling in the fingers and large articulations of the lower extremities, as also considerable uneasiness about the præcordial region. A bellows murmur, friction sound, and extensive dullness of percussion clearly showed that he was suffering with rheumatic inflammation of the membranes of the heart; there was moderate emaciation, but no fever; and it is by no means improbable that the affection of the heart had been of some duration; pulse about 90, and perfectly regular. This patient was at first treated with colchicum, Dover's powder, blue pill, and a blister over the heart.

By the 2d of May the cardiac symptoms, as well as the pain and swelling of the joints, had greatly diminished, and he was anxious to leave his bed. From this time up to the 24th of same month, he continued slowly to improve, but not without occasional slight exacerbations; his gums being now a little tender, the tincture of guaiacum was substituted for the blue pill.

The following day, May 25th, just one month after his admission, he was confined to his bed by a painful swelling of his left knee, and as he was much discouraged by the obstinacy of his case, I was induced to administer the lemon-juice, to the exclusion of all other treatment. June the 1st, he was in good spirits, and stated that he suffered less pain and stiffness than he had done for the last ten weeks. The urine, as tested by litmus paper, was neutral, and contained but a small amount of urate of ammonia; his pulse never fell below 80 whilst under the use of the acid. He remained in the hospital up to the 13th of the month, and, upon leaving, stated that he was better than he had been for five months; the stiffness had in a great measure disappeared, but there was still some swelling about the knuckles; a bellows sound, with some dullness of percussion over the heart, also remained.

Case VIII.—Bell, a sailor, aged thirty-eight, entered May 27th, with acute rheumatism of one week's duration, involving hands and feet, but unattended by cardiac symptoms; tongue coated; pulse 120, and the skin bathed with acid perspiration. Last winter he had a somewhat similar attack, but not so violent as on the present occasion. The lemon-juice was at once prescribed. On the 30th there was a decided improvement of all the symptoms; and by the 2d of June, or six days after admission, there was no fever, the pains were in a great measure relieved, and the pulse had fallen to 75; the knuckles, however, still remained stiff and swollen. The urine was decidedly acid, and contained a large amount of the lithate of ammonia; but by the application of heat it became perfectly limpid. From this time up to June the 14th he continued up and about, and was apparently well pleased with his improvement, though, at the same time, he suffered with some uneasiness and stiffness of the hands. On the 16th, the juice was discontinued, and soap

liniment was directed for the stiffness and swelling of the knuckles which still remained.

CASE IX.—Hart, a sailor, aged thirty-two, entered May 22d, with subacute rheumatism of three weeks' standing, involving the large and small articulations of the upper and lower extremities, but more especially the knees and wrists; these parts were stiff and swollen, but not very painful; pulse natural, and no disease of the heart. A year or two ago he had a somewhat similar attack.

Though this was a case in which the lemon-juice is said to be of comparatively little avail, I still felt disposed to test its efficacy even in apparently unfavorable circumstances. Under its use the patient continued gradually to improve up to June 3d, or twelfth day after admission; he could now walk with comparative ease, and, with the exception of some slight stiffness and debility, considered himself quite well. The urine was neutral, or perhaps slightly acid, and contained a small quantity of urate of ammonia.

June 12*th*. The swelling and stiffness of the hands still continued, but to a much less extent than at last report, nor had there been any return of the pain or uneasiness. On the 16th the acid was stopped, and he used nothing but soap liniment for the remaining stiffness.

CASE X.—Lewis, a sailor, aged twenty-one, entered May 5th, with acute rheumatism, affecting the hands and feet, which were red, swollen, and very painful. The disease had commenced but a few days before his admission, and was attended with some fever, though no disease of the heart existed; pulse 90. For the last five years he had been subject to rheumatism, some of the attacks lasting eight months and others only thirty days. The lemon-juice was prescribed as in the previous cases, and by the 11th, or one week from the time of his admission, he was quite free from pain; there was also a decided diminution of the swelling and stiffness. The treatment, however, was continued, and the patient requested to keep in bed.

May 13*th*. The pain and swelling had returned, and the patient was in all respects as bad as when first admitted; by the 18th, however, without any modification of the treatment,

or other assignable cause, the symptoms were again greatly relieved, and he was enabled to leave his bed without any kind of inconvenience. From this time up to June 12th, he was at times better and worse; the pain and swelling leaving one articulation to fix itself upon another. During the exacerbations, the pulse rose to 90, and again fell to 70 during the remissions, without being apparently in the least degree influenced by the treatment. In connection with this case, it should be mentioned that the urine was tested on the 7th of June, and found to be but slightly acid—less so than in health—and contained a large amount of lithate of ammonia. It is also worthy of note that this patient suffered with rheumatic ophthalmia, which appeared to diminish or increase according to the remissions or exacerbations of the general rheumatic affection. He continued under the use of the lemon-juice up to July 1st, a period of nearly two months, but still suffered with occasional attacks of pain and swelling about the wrists.

Case XI.—Conner, an engineer, aged thirty, entered the Hospital April 7th, suffering with rheumatic pains of feet and back, but more particularly of the former, unattended by fever or cardiac symptoms. States that he has had several similar attacks on former occasions. Considering the case one to which the lemon-juice was not particularly well adapted, the treatment during the first three weeks consisted in the administration of colchicum, magnesia, and Dover's powder, whilst at the same time the tincture of aconite, veratria ointment, and blisters were applied to the painful parts, without, however, affording any marked relief.

April 29th. He was seized with a severe attack of pain and swelling in the foot and knee, followed, the next day, by stricture of the chest and great oppression, requiring the use of morphia and sinapisms. Under these circumstances, and the patient not having experienced any very decided relief from the former treatment, it was deemed expedient to try the lemon-juice. By the 7th of May, or about one week from the commencement of this treatment, there was a very perceptible improvement. He was now cheerful, and said that he had slept well last night for the first time since in the institution. Tenderness of the feet, and debility, however, obliged him to keep his bed.

May 13*th*. He was now out of bed, and could walk without much difficulty, but still complained of some tenderness of the soles of his feet.

20*th*. There was a return of the pain, lasting for two or three days, but by no means so severe as on the former occasion. From this time, with occasional slight fluctuations, he continued gradually to improve up to the 12th of June, at which time he had a slight attack of diarrhœa and griping pain, requiring the use of the lemon-juice to be suspended. The urine was tested on the 2d of June, and found to be nearly neutral, or perhaps very slightly acid; it was also perfectly limpid, but not materially increased in quantity. His pulse at no time during the treatment fell below 75. This patient was discharged June 26th, much relieved, but still complaining of slight rheumatic pains in different parts of the body.

Case XII.—Trainer, a young girl aged sixteen, admitted April 9th, with subacute rheumatism, affecting the feet and hands, but unattended by fever or cardiac symptoms. Her sickness commenced about two weeks before entering the hospital; and she had already been purged, cupped, and otherwise treated, without any improvement of the symptoms. Up to May 1st, various remedies were administered, such as Scudamore's mixture, calomel and opium, colchicum, and Dover's powder, without, however, producing any decidedly favorable impression upon the disease. At this date there was a sudden and severe aggravation of all the symptoms, and a bellows sound, which was barely perceptible some days previous, had now become loud and harsh. Under these circumstances, the lemon-juice was prescribed, to the exclusion of all other treatment.

By the 6th of May the patient was up and about, apparently better than she had been since her admission. The bellows sound was also much less distinct than at last report, and hopes were entertained that convalescence was established. On the following day, however, she was seized with inflammation of the tonsils and a great increase of the rheumatic symptoms. The disease of the throat was promptly relieved by the application of the nitrate of silver; but the rheumatic pains, and inflammation about the membranes of the heart being on the increase, it was deemed most expedient to suspend the use of the lemon-

juice, which was accordingly done on the 15th. From this time the calomel, opium, and colchicum plan of treatment was again resumed, in connection with ten drops of the tincture of digitalis, three times a-day.

On the 22d, or at the end of one week, the same decided improvement was observed, as had followed the use of the lemon-juice on the 6th of the month; and the patient now only complained of slight pain and stiffness of the shoulder. Her mouth being sore, the calomel was suspended, and in its place were directed ten drops of the wine of colchicum, with the same quantity of the tincture of digitalis, three times a-day. No notable change occurred up to June 2d, when there was another decided relapse, attended with pain and swelling of the shoulders and ankles, requiring the patient again to take to her bed. The lemon-juice was once more resumed, and followed, in the course of three or four days, by a remission in the symptoms, similar to that which had occurred on several former occasions; but still the disease was not subdued, and the patient continued to suffer more or less pain in the different articulations, up to June 15th. By the 25th she appeared quite free from pain, and complained only of slight stiffness; the bellows sound and dullness of percussion over the cardiac region still persisted.

Case XIII.—Mitchell, a sailor, aged thirty-five, entered June 3d; sick one week with acute inflammatory rheumatism, involving all the large and small articulations, and attended by fever and copious acid perspirations. The heart, however, was not implicated. Pulse in the morning about 90, and during the evening exacerbations at least 120. Before admission, he had been subjected to no treatment. The specific gravity of the urine, previously to the administration of the lemon-juice, was 1.034; it was turbid, and contained a large amount of the lithates.

June 5th, or 48 hours after the acid treatment had been commenced, the specific gravity had fallen to 1.023, and by the following day it was only 1.016; at the same time it was tested by litmus paper, and found to be slightly acid. With this change in the urine there was also a notable improvement in the symptoms; the pain, swelling, and fever were much less, and the pulse had fallen to 75.

On the 9th, or five days after admission, he could walk about, but still complained of pain and stiffness, which he ascribed to change of weather. From this time up to the 15th, he was in a great measure confined to his bed, with severe pain, first affecting the arm and leg of one side, and then extending to the other; but upon the whole he considered himself much better than when first admitted.

30*th*. Since last report he has had constant remissions and exacerbations, but was now much improved, and suffered chiefly with stiffness of the left wrist and shoulder. His pulse continued at about 75, and he was entirely free from fever.

Case XIV.—Phelin, a young woman, aged twenty-two, entered June 11, sick about one week, with acute rheumatism, affecting hands and knees, but more especially the former, which were much swollen and extremely painful. Pulse at least 120, with copious acid perspiration, but without any cardiac complication.

The lemon-juice was now directed in the usual dose. On the 13th, her condition was in no respect improved; she had passed a restless night, and the left hand was even more swollen than at time of admission. The urine, as tested by litmus paper, was almost neutral, or so slightly acid that it could scarcely be perceived. Specific gravity only 1.017.

14*th*, or just three days after admission, she had slept well during the night, and this morning was comparatively free from pain and fever. On the following day there was a still further improvement; she had passed an excellent night, was free from pain, and could move her fingers; the pulse had fallen to 80.

During the next two weeks, or up to June 28th, she was in a great measure confined to bed, and still complained of occasional pain in the wrist and knuckles of left hand, which also continued more or less swollen and stiff. The pulse remained at about 75; she slept well, and was entirely free from fever.

On the third day after admission the urine was found to be less acid than in health, perfectly clear, but moderate in quantity, its specific gravity being only 1.017.

In this instance it is evident that the lemon-juice was not followed by the same rapid recovery as in some of the first mentioned cases; the disease, having gradually assumed the sub-

acute form, appeared to be but little influenced by the treatment after the first few days.

From a review of the other cases, we find the most marked improvement in Nos. I, II, III, IV, V, VI, all of which were uncomplicated by any serious affection of the heart, and occurred in young and previously healthy individuals. Cases VIII and XIII were also acute; but as these patients were sailors, more advanced in life and probably of previous intemperate habits, the same rapid improvement was hardly to be expected as in the former instances; yet we find that even under these unfavorable circumstances, the most urgent symptoms had yielded before the expiration of a week. In Case X, the treatment appeared to have no control over the symptoms. But here it should be remembered that the patient had been subject to the disease for five years, and that the present attack was less acute, and, therefore, less likely to be amenable to treatment than the first named cases. In Case IX, the acute symptoms had in a great measure subsided before the patient entered the hospital, and it is quite impossible to say whether or not the treatment had much to do with his gradual improvement. In the remaining cases, VII, XI, and XII, the lemon-juice was used after other treatment had failed, and it certainly appeared to have a more or less salutary effect, notwithstanding that two of these had serious cardiac complications; at the same time, it is evident that any improvement occurring at an advanced stage of the disease might, in a measure at least, be ascribed to a gradual decline of the symptoms quite independent of any remedial agency.

Upon the whole, then, it would appear that the general result has been favorable to the use of lemon-juice in acute uncomplicated rheumatism. Even in the subacute or more chronic forms, it seems, in several instances, to have been followed by decided relief, whilst under no circumstance has it been productive of an injurious result. At the same time, we feel that the number of cases just reported is entirely too limited to enable us to form any positive conclusion as to the curative powers of lemon-juice in this disease, particularly when we call to mind the numerous and sudden changes by which this affection is characterized, whether abandoned to itself or subjected to the various modes of treatment which have from time to time been

recommended. It would have been both curious and instructive to have reported, in connection with the above cases, others of a similar character in which the lemon-juice had not been administered; but I have perhaps already wearied the patience of the college, and must hasten to bring these remarks to a close. I would simply state, however, that, during the month of March, of the current year, two cases of acute rheumatism were admitted into the hospital, both of which were treated chiefly by calomel and opium, with colchicum and magnesia; the first, though complicated with severe endocarditis, was fully convalescent by the end of the twelfth day; whilst in the second instance the relief was even more prompt, the patient being nearly well by the expiration of one week. On looking over my notes on hospital cases for the last nine years, I also found many instances of acute inflammatory rheumatism recovering in the course of one or two weeks under this plan of treatment; on the other hand, it is true, there were cases of an apparently similar character reported, in which no such favorable results were obtained; and it would be important to ascertain, by further experience, whether, under such circumstances, the "acid treatment" would be more efficacious. The very favorable reports from abroad certainly entitle this remedy to the attentive consideration of the profession; and, should it be found not inferior to the other plans of treatment, it would at least have the advantage of agreeable flavor, without, at the same time, impairing the general health, as sometimes happens from the use of more heroic remedies.

In most of the instances in which the urine was examined, it was found to be either neutral or much less acid than in health; whilst, at the same time, it was unusually clear, and contained but a small amount of lithates: in no instance, however, did it appear to be materially increased in quantity. Upon one occasion it was concentrated by evaporation, and then tested with sulphuric acid, with the view of ascertaining whether the slight acidity might not depend upon the presence of carbonic acid, in the form of a bicarbonate—but no effervescence was produced. In no instance was the urine rendered alkaline by the lemon-juice treatment; nor is this surprising, when we recollect that, according to the statement of Dr. Rees, less than a grain of the alkaline citrate is contained in an ounce of the juice.

For the same reason, it is quite inconceivable that the wonderful effects ascribed to this remedy could possibly be owing to the daily introduction into the system of one or two grains of the citrate of potash.

One of the most remarkable effects ascribed to the lemon-juice is its sedative effect upon the circulation, as manifested by a sudden falling of the pulse; this peculiarity was well marked in several of the acute cases above reported, whereas, in the subacute or more chronic forms, no such effect was produced. The same result, however, has been observed in acute rheumatism under other forms of treatment, such as quinia and nitre in large doses, or even when nothing but the expectant plan of treatment had been pursued, and it is therefore apparent that much importance should not be attached to this phenomenon in our endeavors to explain the *modus operandi* of lemon-juice.

In concluding this communication, I would state that I am much indebted to Drs. Hollingsworth and Hunt for their careful examinations of the urine, as also for other important information in regard to the above cases.

Dr. COATES believed that there was an error in the chemistry of the theory or explanation, by which good effects were demanded of the vegetable acids, in the treatment of rheumatism. The vegetable acids were not oxidating substances when introduced into the animal economy; they were de-oxidating or dis-oxygenizing substances. They carried more oxygen out of the animal body than they brought into it; and this loss was supplied at the expense of the blood. It was granted that these substances were never found among the excreta; the matters of which they were composed were, when discharged, combined in the form of carbonic acid and water, either separate, or having the carbonic acid combined with alkalies or lime, found in the composition of the fluids. When converted into carbonic acid and water, the vegetable acids always absorbed oxygen, necessary for the composition of the two resulting products.

This corresponded with the chemical theory that gouty matter was in want of further oxidation preparatory to its discharge

by the kidneys; and with the usual experience, that vegetable acids rendered gout worse, or produced it. The analogy of gout to rheumatism, on which the speaker did not now insist, was adverse to the hope of benefit from the use of vegetable acids in rheumatism.

Dr. Coates was acquainted with Linnæus's case of alleged cure by strawberries.

These considerations agreed well with the results of Dr. Pepper's interesting and scrupulous observations. He had not found them useful in *chronic*, but only generally or frequently so in *acute* rheumatism. Acute rheumatism was rheumatism accompanied by fever; and the use of subacid drinks, and in some cases of the fruits themselves, under the name of *fructûs acido-dulces*, for the sake of their sedative effects in fever, was familiar, and had descended to us from former ages. It was, he believed, Hippocratic. In this way, he saw no impediment to lemon-juice being serviceable in acute rheumatism, doing some harm, but more good.

Dr. Coates had derived his chemical ideas on this subject from Liebig, Bence Jones, the extract from Berzelius translated and published in this city by Drs. Smith and Boyé, and one or two of the systematic works; but as he saw an eminent chemist present (Dr. Bache), he hoped the latter would correct him, if his indiscretion had led him into error.

Dr. BACHE believed that there was strong evidence for supposing a very decided connection to exist between gout and an excess of acid in the fluids of the body; and the idea of neutralizing this excess of acidity by the administration of an alkali, would naturally suggest itself to the practitioner.

Rheumatism is a term of very loose application. It is used to designate a variety of complaints, some of which are evidently dissimilar in character. Between certain forms of rheumatism and gout, there exists, no doubt, a close relationship, so as to render the same remedies appropriate in both.

It has been supposed that the vegetable acid juices do good in those cases of rheumatism in which they have been found useful, in consequence of the alkali they contain. The whole of the vegetable acid, when taken into the stomach and digested,

becomes converted by an addition of oxygen into carbonic acid, leaving the alkali free. But if lemon-juice contain less than one grain of alkali to the fluidounce, as stated by Dr. Reese, this proportion would have but little influence upon any excess of acid in the fluids of the body, when the juice is taken in the doses recommended.

According to Dr. Keating, pure citric acid was found, when employed at the St. Joseph's Hospital, in cases of rheumatism, to exert the same beneficial effects as the lemon-juice. Now, in pure citric acid there is no alkali; consequently, if further experience shall show that in rheumatism similar therapeutical powers are exerted by it, as by the lemon-juice, we must look for an explanation of these powers to some property of the acid, independent of the alkali combined with it in the juice of the lemon.

Dr. COATES remarked that the addition of strong mineral acids to concentrated urine, as described by Dr. Hollingsworth, furnished no test of the presence of carbonic acid in the urine, but only of that of the carbonates; as free carbonic acid, dissolved in the urine, would have been expelled by the process of concentration. He inquired whether it was certain that carbonic acid, dissolved in the urine, in the presence of alkaline carbonates, would act on test paper. He recollected Linnæus's alleged case of his own recovery from gout, in Lapland, by the liberal use of strawberries. This case was in the *Amœnitates Academicæ;* but Dr. Coates did not know of any other, and presumed Linnæus's cure was an accidental coincidence. Dr. C. recapitulated the explanation he had given; and expressed the belief that it agreed with Dr. Pepper's further detail. Dr. Coates had understood Dr. Pepper that the latter did not consider his cases sufficient for a final and positive decision; but that apparently, the lemon-juice was beneficial, as previously mentioned, only in the acute cases. If, as Dr. Coates judged to be the case, the beneficial results from the use of lemon-juice arose from its sedative or cooling agency, and was effected in spite of its deoxidating action, this treatment would be in the same case with those by the moderate and rational use of bleeding, and of the nitrate of potass. The benefits of both these last were very great, and

were certainly very well known in the United States before the same modes of treatment, carried to a greater length, became the subject of popular excitement among medical men.

A proposition (25) for Fellowship was presented.

Dr. NEILL, Curator, presented the following catalogue of donations presented to the Pathological Cabinet:—

REPORT ON PATHOLOGICAL CABINET.

48. Ossification of the Semilunar Valves of the Aorta. From Dr. Parrish's collection. Presented by Dr. I. Parrish.

49. Ossification of the Coronary Arteries. From Dr. Parrish's collection. Presented by Dr. I. Parrish.

50. Very large Eustachian Valve, from an adult. From Dr. Parrish's collection. Presented by Dr. I. Parrish.

51. Hypertrophy and Dilatation of the Heart, from a boy who had suffered with Rheumatism. From Dr. Parrish's collection. Presented by Dr. I. Parrish.

52. Enlarged Eustachian Valve, from an adult heart. From Dr. Parrish's collection. Presented by Dr. I. Parrish.

53. Ossification of the Mitral Valve. From Dr. Parrish's collection. Presented by Dr. I. Parrish.

54. Ossification of the Aorta. From Dr. Parrish's collection. Presented by Dr. I. Parrish.

55. Human Horn. Presented by Dr. Hays.

56. Human Ovum, showing the pullulation of the Embryo. Presented by Dr. Moore.

57. Softening of the Spinal Marrow, and thickening of the Arachnoid. Presented by Dr. I. Parrish.

58. Cancer of the Liver and Gall-Bladder. Presented by Dr. Tucker.

59. Lumbricus which had insinuated itself into the eye portion of a hook and eye, such as is employed in fastening ladies' dresses. Presented by Dr. Hodge.

60. Perforation of the Stomach. Presented by Dr. Jackson.

61. Needle imbedded in the Left Ventricle of the Heart. Presented by Dr. Neill.

62. Biliary Calculus, size of a hickory nut, showing radiated

crystals of cholesterine, discharged per anum. Presented by Dr. Parrish.

63. Larynx and Trachea, from a case of Membranous Croup. Presented by Dr. Griscom.

64. Cancer of the Lungs,
65. " " Stomach,
66. " " Diaphragm,
67. " " Kidney.

} Presented by Dr. Pepper.

SUMMARY

OF THE

TRANSACTIONS OF THE

COLLEGE OF PHYSICIANS,

OF PHILADELPHIA.

FROM AUGUST 5 TO OCTOBER 7, 1851, INCLUSIVE.

Stated meeting, August 5th, 1851.

Dr. BACHE in the chair.

Present twenty-four members.

The following gentlemen were duly admitted Fellows: WILSON JEWELL, M. D., JOSEPH LEIDY, M. D., and ELLWOOD WILSON, M. D.

The Publishing Committee reported that the *third* number of the new series of the *Summary of Transactions* had been issued.

The report of the London Board of Health on the Cholera of 1848–49, with two appendices, was presented to the Library by Dr. Addinel Hewson.

Dr. PARRISH presented some remarks on the influence of solitary confinement on the health of convicts.

Dr. BACHE remarked that he felt a deep interest in the subject that Dr. Parrish had this evening brought before the College. Having held the situation of physician to the Walnut Street prison for ten years, and to the separate confinement

prison of Cherry Hill for the first seven years after its establishment, he believed he had some experience as to the comparative influence, upon the health of prisoners, of the gregarious and separate confinement systems.

In drawing up the tables of mortality for the Walnut Street prison, Dr. Bache stated, that he found the deaths to average six per cent. for a series of years; while, during the seven years of his official connection with the Cherry Hill prison, the average mortality was only three per cent.

Dr. Bache believed there must be some mistake in regard to the statement made by Dr. Parrish, that a great increase of mortality among the prisoners subjected to separate confinement had occurred from scrofula and phthisis, when compared with the mortality from the same diseases among prisoners subjected to the gregarious system. So far as Dr. B.'s experience went, he had seen a greater number of cases of these diseases in the Walnut Street prison than in that of Cherry Hill. In both prisons they prevailed to a considerable extent, and were the cause of a large part of the deaths that occurred; but the mortality from these diseases was, perhaps, twice as great in the Walnut Street prison as in that of Cherry Hill.

Dr. Bache considered it inaccurate to estimate the mortality of a prison by comparing the deaths with the admissions, irrespective of the length of the sentences. The proper way to make the estimate is to note the ratio of the deaths to the average number in confinement for a given time, say a year. By pursuing this plan of estimation, the favorable influence of short sentences will be made evident without exaggeration. The authorities of some prisons, instead of striking an average of those in confinement for a year, add the prisoners present at the beginning of the year to those received during the year, and on this sum calculate the percentage of mortality. This plan would be unfair, even if no discharges took place within the year; but it becomes doubly so when these take place, and no deduction is made for them.

To speak of the coldness, dampness, and bad ventilation of any given prison as producing a baneful influence on the health of its inmates, has nothing to do with the question of the influence upon the health of prisoners of the separate confinement system as such. A prison in which the gregarious system is

pursued may be as cold, damp, and ill ventilated as one in which the system of separate confinement is carried into practice.

That our prisons should be as well constructed, in reference to dryness and ventilation, as circumstances will admit, and kept always of a comfortable temperature, is unquestionably true; and that the diet and clothing, the personal cleanliness and occupations of the prisoners should be such as to guard them from disease and unnecessary suffering, the commonest feelings of humanity would dictate. But there are some who are not satisfied with this. They would have our prisons so constructed, and our systems of prison discipline so modified, that the prisoners shall be rendered as comfortable and healthy, as are moral and industrious persons in humble life without the prison walls. This, however, is impossible. Confinement is an unnatural state, and, consequently, those forced to endure it cannot enjoy the same amount of health as those who have their liberty; and the extent of the impairment of health will be, *cæteris paribus*, in proportion to the duration of the confinement.

Dr. Bache admitted that he had observed more cases of insanity at Cherry Hill than in the Walnut Street prison. It has been suggested that, perhaps, the isolation of the prisoners, in the separate confinement system, by placing each one of them more immediately under the eye of the medical officer, enables him to detect slight aberrations of mind, which would have passed unnoticed when the prisoners are congregated together. But, after giving due weight to this suggestion, he still believed that there was a greater amount of insanity among the prisoners at Cherry Hill than among those in the Walnut Street prison.

Dr. PARRISH replied, that in the statements which he had presented to the College, he had endeavored to confine himself strictly to the official tables issued by the two separate plan prisons in Philadelphia, with the view of instituting a comparison of the mortality and insanity of these institutions with the same class of prisons in England, so far as the latter are made known to us by a paper of Dr. Forbes Winslow, recently published in the London *Lancet*.

He wished to avoid complicating the question by discussing the relative merits of the two systems of prison discipline now in

vogue, as he believed that this had had the effect of obscuring the true merits of the subject in its medical bearings.

If there was any error in the facts presented in the paper, he would see to its correction before publication, and would, therefore, ask of the college to refer it back to him, and he would carefully revise it.

The following report was presented:—

REPORT ON METEOROLOGY AND EPIDEMICS, FOR THE YEAR 1850. BY W. S. W. RUSCHENBERGER, M.D., U. S. NAVY.

Your Committee on "Epidemics and Meteorology" submits, in tabular form, a statement of mortality collated from the weekly reports of the Board of Health of Philadelphia, for the year 1850.

The table exhibits the number dead each week from diseases, with the quarterly and yearly aggregate number that have died of each of the diseases named. The year is divided into four quarters of thirteen weeks each; it commenced on the 29th of December, 1849, and terminated on the 28th of December, 1850, both days included.

It was conjectured that this table would show what diseases had prevailed most extensively, and what were the epidemics of the year; but close examination will lead to a conclusion that the data furnished are defective and incomplete, and, therefore, the results are, at best, merely proximate to the truth.

All the deaths and burials which occur in the county of Philadelphia are not reported to the Board of Health; its jurisdiction is limited to the city and incorporated districts, and does not extend to the several boroughs. For this reason, a comparison of mortality, as stated by the Board of Health, with the population of the county must afford a very uncertain measure of the common health of the city and county of Philadelphia.

According to this table, the aggregate number of deaths from all causes, for the year ending December 28, 1850, was 8488. Of this number, 2553, which includes 453 still-born, died under one year of age; 1052 died between the ages of one and two years; and 950 between the ages of two and five years. Exclusive of the still-born, 4102, or rather more than 48 per cent. of the whole number, perished under the age of five years.

On the other hand, 464, or 5.46 per cent., lived beyond the allotted period of threescore and ten years; and of these 36 had passed the ninetieth, and 4 had passed the hundredth year of age.

Deducting the still-born (453), the deaths from all causes reported by the Board of Health amount to 8025.

According to the table, 185 deaths are attributed to "old age," an epithet of indefinite application; 147 to "unknown" causes, and 79 to "casualties," which number does not include the 49 deaths from "burns and scalds," the 94 "drowned," the 20 from "suicide," the 10 from "fractures," and the 5 from "wounds." An aggregate of 411 or 5.12 per cent. of the deaths of those born alive, are set down to indefinite or unknown causes: and to this number may be added the 201 deaths attributed to "debility." Deducting these 612, leaves the total number of deaths from disease or clearly recognized causes at 7413.

The number of deaths from diseases of the lungs and air-passages is 1850, or 23.05 per cent. of the whole (8025); or, if we include hooping-cough in the group, 1967, or 24.51 per cent. of the whole, as follows:—

	1st Qr.	2d Qr.	3d Qr.	4th Qr.	Total.
Abscess, pulmonary . .	5	3	0	4	12
Asphyxia	4	4	3	6	17
Asthma	1	3	5	4	13
Congestion of the lungs .	15	17	11	15	58
Consumption of the lungs .	225	236	214	232	907
Croup	41	30	19	53	143
Disease of the lungs . .	6	11	11	4	32
Dropsy of the chest . .	21	18	7	17	63
Effusion on the lungs . .	2	1	1	0	4
Hemorrhage of the lungs .	7	8	5	4	24
Inflammation of the bronchi	66	52	28	45	191
" " larynx .	5	7	2	9	23
" " lungs .	114	112	57	69	352
" " pleura .	4	3	3	1	11
	516	505	366	463	1850
Whooping-cough . . .	13	21	60	23	117
	529	526	426	486	1967

The number of deaths from diseases of the brain and of the nervous system is 1501, or 18.70 per cent. of the aggregate number of deaths, excluding the still-born, as follows:—

	1st Qr.	2d Qr.	3d Qr.	4th Qr.	Total.
Apoplexy	21	30	27	19	97
Compression of the brain	1	2	2	0	5
Concussion of the brain	0	0	1	1	2
Congestion of the brain	12	22	43	20	97
Convulsions	96	112	148	88	444
Disease of the brain	24	25	29	10	88
Dropsy of the head	63	86	102	32	283
Effusion on brain	11	20	30	13	74
Epilepsy	5	0	6	3	14
Inflammation of brain	47	59	77	35	218
Mania	0	2	2	1	5
Mania à potu	9	17	13	15	54
Neuralgia	3	1	0	1	5
Palsy	20	14	17	20	71
Softening of the brain	2	2	2	4	10
Tetanus	0	3	3	5	11
Teething	3	6	12	2	23
	317	401	511	269	1501

The number of deaths from diseases of some of the organs of nutrition is 1846, or 23 per cent. of the total mortality, as follows:—

	1st Qr.	2d Qr.	3d Qr.	4th Qr.	Total.
Cholera	0	1	5	0	6
" infantum	3	57	436	9	505
" morbus	1	11	11	1	24
Colica pictonum	0	1	0	1	2
Colic	0	1	2	2	5
Diarrhœa	18	32	125	33	208
Diseases of bowels and stomach	2	4	15	8	29
Disease of liver	8	5	7	6	26
Dysentery	21	60	254	86	421
Inflammation of liver	8	10	14	5	37
" of peritoneum	19	14	11	18	62
" of stomach and bowels	38	43	68	38	187
Marasmus	23	43	114	37	217
Scrofula	13	16	12	16	57
Tabes mesenterica	1	8	11	5	25
Tuberculosis	3	3	5	5	16
Ulceration of bowels	3	6	6	4	19
	161	315	1096	274	1846

The number of deaths from the various fevers is 769, or 9.50 per cent. of the total mortality. The number of deaths from scarlet fever alone is 439, or 5.47 per cent. of the whole mortality. This disease prevailed throughout the year. Deaths from scarlet fever are recorded every week throughout the year,

excepting three, that is, the 26th, 31st, and 38th week. The greatest number of deaths was in the first and second quarters; they were fewest in the third quarter, or summer, when the average was rather less than four deaths weekly.

The mortality from fevers is stated as follows:—

	1st Qr.	2d Qr.	3d Qr.	4th Qr.	Total.
Fever	6	12	11	3	32
" bilious	6	0	5	4	15
" catarrhal	1	2	0	0	3
" congestive	2	1	6	8	17
" continued	1	1	0	1	3
" hectic	2	0	3	0	5
" intermittent	2	2	7	4	15
" nervous	1	0	0	0	1
" puerperal	7	7	8	8	30
" remittent	5	4	17	9	35
" scarlet	160	144	50	85	439
" typhoid	24	18	30	33	105
" typhus	18	18	16	17	69
	235	209	153	172	769

The mortality from measles, small-pox, varicella, and varioloid, is exhibited in the following statement. The aggregate number of deaths from these diseases is 113, or 1.40 per cent. of the total mortality.

	1st Qr.	2d Qr.	3d Qr.	4th Qr.	Total.
Measles	21	32	10	6	69
Small-pox	8	11	13	8	40
Varicella	0	1	1	1	3
Varioloid	0	0	0	1	1
	29	44	24	16	113

The following table embraces those diseases which caused the largest number of deaths, and shows, therefore, those which have been most prevalent. Where the number of deaths does not reach one hundred, the disease is not mentioned.

	1st Qr.	2d Qr.	3d Qr.	4th Qr.	Total.
Cholera infantum	3	57	436	9	505
Consumption of the lungs	225	236	214	232	907
Convulsions	96	112	148	88	444
Croup	41	30	19	53	143
Debility	32	60	68	41	201
Diarrhœa	18	32	125	33	208
Disease of the heart	30	29	20	22	101
Dropsy	29	26	30	31	116
Dropsy of head	63	86	102	32	283
Dysentery	21	60	254	86	421
Fever, scarlet	160	144	50	85	439
Fever, typhoid	24	18	30	33	105
Inflammation of brain	47	59	77	35	218
" of bronchi	66	52	28	45	191
" of lungs	114	112	57	69	352
" of stomach and bowels	38	43	68	38	187
Marasmus	23	43	114	37	217
Old age	38	47	54	46	185
Unknown	31	36	40	40	147
Whooping-cough	13	21	60	23	117

According to these data, the most prevalent and fatal diseases of 1850 in the County of Philadelphia were, consumption of the lungs (907), cholera infantum (505), convulsions (444), scarlet fever (439), dysentery (421), and inflammation of the lungs (352).

The local circumstances of the several districts included in Philadelphia County differ from each other respectively. The health of the several districts is therefore not to be inferred from a statement of the mortality of the county. In the Richmond district, according to the report of Dr. Edgar Janvier, intermittent fevers prevailed during the autumn of 1850; and "pertussis, rubeola, scarlatina, and varicella, prevailed epidemically at different periods during the year, but have manifested nothing unusual in their type." Scarlet fever is represented to have been of a comparatively mild type in Kensington. In this district, it is stated that "abscesses, felons, and carbuncles" have prevailed "to an unusual extent and amongst all classes of people." In West Philadelphia there was less disease of epidemic character during the year than usual. Dr. Gallagher states that typhoid fever has prevailed in this district more or less during the past sixteen years; the cases usually occur in the autumn. The Northern Liberties, Spring Garden, and Penn District, as well as Southwark, appear to have suffered very little, if at all, from epidemic disease during the year.

By reference to the preceding tables, it will be seen that diseases of the lungs and air-passages were most fatal during the winter and spring, except hooping-cough, which was nearly three times more fatal, and probably more prevalent, during the summer. But the number of deaths from phthisis seems to have been influenced very little by temperature; the greatest number in the spring (236) exceeding the lowest in the summer (214) by 22, while the difference between the winter and autumn is only 7. The quarterly average number of deaths from phthisis was 226.75.

Nervous affections were more fatal during the third quarter or summer than any other season; and the same is true of the diseases of the alimentary canal. But fevers were more fatal during the winter and spring.

The deaths from scarlet fever during the winter, and during the spring, were three times greater than during the summer.

A meteorological summary is appended.

1850.	RAIN.	TEMPERATURE.				
	Inches.	Highest.	Lowest.	Mean.	Range.	
January . .	4.77	59°	16°	37°	43°	
February .	2.87	62°	12°	38.6°	50°	
March . .	4.75	70°	20°	40.91°	50°	2.63° F. above average.
April . . .	2.665	76°	42°	51.07°	34°	1° F. below average.
May . . .	6.50	83°	46°	59.83°	37°	3.67° F. below average.
June . . .	2.03	92°	54°	74°	38°	3° F. above average.
July . . .	5.97	93°	63°	79.20°	30°	4° F. above average.
August . .	8.33	88°	61°	74 5°	27°	1.5° F. above average.
September .	7.732	83°	52°	68°	31°	2° F. above average.
October . .	7.092	76°	38°	76.63°	38°	3.5° F. above average.
November .	3.52	69°	33°	49.5°	36°	7° F. above average.
December .	4.515	54°	19°	37.1°	35°	5.9° F. above average.
	59.544					

The total amount of rain for the year 1850 was 59.54 inches.

The mean temperature of the year was 55.31° F., or about three degrees above the mean average of sixty years.

During the year the thermometer ranged from 12° F. to 93° F.

TABLE OF MORTALITY,

FROM RETURNS TO BOARD OF HEALTH OF PHILADELPHIA, FOR THE YEAR 1850.

COLLATED BY W. S. W. RUSCHENBERGER, M. D.

	January, February, March, 1850.													Total 1st qr.	April, May, June, 1850.													Total 2d qr.
Abscess	0	1	0	0	0	1	0	0	0	0	0	0	0	2	1	0	0	1	0	0	0	1	0	0	1	0	0	4
" of brain	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" knee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" liver	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" lungs	0	0	0	0	0	1	1	0	1	0	0	0	0	4	1	0	0	0	0	1	0	1	0	0	0	0	0	3
" neck	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	1
" perineum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" pleura	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Albuminuria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anæmia	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	0	0	1	1	1	0	6
Angina pectoris	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Aneurism	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Apoplexy	0	2	2	2	1	3	2	1	2	3	1	2	0	21	3	0	1	0	3	2	2	3	3	1	3	3	6	30
Aphthæ	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asphyxia	0	0	0	0	0	0	0	2	0	0	0	1	1	4	1	2	0	0	0	0	0	0	0	0	0	0	1	4
Asthma	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	1	3
Burns and scalds	0	1	1	0	3	1	1	3	1	0	1	0	2	14	1	1	0	0	1	3	0	2	2	0	0	1	2	13
Cachexia	1	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Cancer and scirrhus	1	1	1	0	0	0	0	0	0	1	0	0	0	4	0	0	1	0	0	0	0	0	1	0	0	0	0	2
" of mouth and face	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
" mamma	0	0	1	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	2
" liver	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
" pylorus	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" lungs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
" stomach	1	0	0	0	1	0	0	0	0	0	0	0	0	3	1	1	1	1	0	0	0	1	0	1	0	0	0	6
" throat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
" uterus	0	2	0	0	2	0	0	0	0	1	0	0	0	5	0	0	1	0	0	0	0	0	0	0	0	1	1	3
Cancrum oris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4

Caries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Casualties	2	1	1	0	1	0	1	1	1	1	2	0	0	11	4	0	1	0	3	0	1	0	1	0	2	0	0	12
Child-bed	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	2
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
" infantum	0	0	0	0	0	1	0	0	1	0	0	1	0	3	1	0	0	0	1	0	1	0	1	1	11	14	27	57
" morbus	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	1	1	0	1	1	1	4	11
Colica pictonum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Colic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Compression of brain	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	2
Concussion of brain	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Congestion of brain	2	0	0	1	0	1	0	1	2	0	4	1	0	12	0	4	3	2	0	3	0	1	4	2	1	0	2	22
" heart	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" lungs	0	2	1	0	4	0	3	0	1	2	0	2	0	15	2	4	1	0	1	2	0	2	1	1	2	0	1	17
Consumption of lungs	22	18	20	6	14	15	24	22	14	16	27	12	15	225	12	12	23	17	14	24	16	19	31	26	14	10	18	256
Convulsions	2	9	2	4	13	5	7	14	8	10	6	5	11	96	6	3	10	7	9	9	8	5	4	10	15	9	17	112
" puerperal	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	1	3
Croup	5	5	2	3	2	4	9	4	3	0	0	4	0	41	3	3	6	3	1	3	4	3	1	1	2	0	0	30
Coup de soleil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Cyanosis	2	1	0	0	0	1	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	2	0	1	0	0	0	3
Debility	5	1	0	0	2	3	2	4	5	2	3	3	2	32	3	3	2	3	5	5	9	6	11	0	3	4	6	60
Dementia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Diabetes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Diarrhœa	2	0	1	0	1	2	0	3	2	0	2	4	1	18	1	0	0	1	0	2	4	4	0	4	3	2	11	32
Disease of brain	3	0	1	3	5	2	2	2	2	0	1	2	1	24	3	2	1	3	3	1	3	0	2	0	3	2	2	25
" bowels	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" elbow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" heart	4	3	3	1	1	1	3	0	2	2	4	4	2	30	3	4	2	2	3	2	1	4	0	0	2	1	5	29
" hip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" kidney	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" liver	0	0	1	0	0	0	1	2	0	0	1	1	0	6	1	0	0	0	0	0	0	0	3	0	0	0	0	4
" lungs	0	2	0	0	0	1	2	0	0	0	1	0	0	6	2	2	2	0	0	0	1	2	1	0	0	0	1	11
" scrotum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" spine	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	1	0	0	0	0	1	2
" spleen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
" stomach and bowels	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	2	4
" throat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Dropsy	3	2	2	4	4	1	0	3	2	8	2	1	2	29	5	1	2	2	1	1	3	2	2	2	1	1	3	26
" abdominal	0	1	0	0	1	0	2	0	1	1	0	6	0	12	0	0	0	0	0	0	1	1	0	2	0	0	0	4

TABLE OF MORTALITY—*Continued.*—(*1st and 2d Quarters.*)

	January, February, March, 1850.														Total 1st qr.	April, May, June, 1850.												Total 2d qr.
Dropsy of breast (chest)	0	1	1	4	2	1	1	2	1	2	0	1	5	21	1	0	0	0	3	2	4	0	2	1	1	3	1	18
" head	3	2	1	3	7	9	2	3	5	12	4	7	5	63	7	9	0	7	8	6	3	9	4	0	12	8	13	86
" heart	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	1	0	0	1	1	0	2	1	0	2	0	9
" ovary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	1
Drowned	0	0	1	0	2	0	0	1	0	1	1	1	1	8	0	4	0	0	7	0	4	3	0	3	2	3	3	29
Dysentery	0	4	2	0	2	1	1	4	2	2	2	1	0	21	2	4	7	1	4	1	2	5	2	1	6	10	15	60
Dysmenorrhœa	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dyspepsia	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Effusion on brain	2	1	0	0	2	1	1	1	0	2	0	0	0	11	2	0	0	1	1	2	3	2	0	0	2	0	0	20
" lungs	0	1	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Emphysema of lungs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Enlargement of heart	0	0	0	0	0	1	2	1	0	0	0	1	0	5	1	1	0	0	0	0	0	0	0	0	0	0	0	2
" liver	0	1	0	0	0	0	1	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	1
" spleen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" ovary	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Epilepsy	0	0	1	1	0	1	0	0	1	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Erysipelas	1	0	0	3	0	1	3	0	0	1	0	1	0	12	0	0	4	0	0	1	4	1	0	3	0	0	1	19
Excessive heat	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fever	2	1	0	0	1	0	0	0	0	1	0	2	0	6	0	2	0	1	1	1	0	1	0	0	2	1	0	12
" bilious	0	0	0	1	0	0	0	1	0	0	2	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" catarrhal	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	2
" congestive	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	1
" continued	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
" hectic	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" intermittent	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	1	0	0	0	0	1	0	2
" nervous	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" puerperal	0	0	0	0	0	1	1	1	1	3	0	0	0	7	0	1	1	1	0	0	1	2	0	0	0	1	0	2
" remittent	1	2	1	0	0	0	0	0	0	0	1	0	0	5	0	0	1	1	0	0	0	1	2	0	0	0	0	4
" scarlet	9	9	17	13	8	8	14	13	7	18	17	8	19	160	18	13	17	12	11	14	14	13	9	4	12	7	0	144
" typhoid	0	2	0	3	2	2	1	2	3	0	1	3	5	24	2	1	4	2	0	4	3	0	1	2	0	1	0	18
" typhus	0	1	1	3	1	2	3	0	2	1	0	2	1	18	2	2	2	2	4	0	0	1	1	2	1	1	0	18
Fistula	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fracture	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
" of skull	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1

Fungus hæmatodes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Gangrene	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	3
Gout	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hemorrhage	0	0	1	0	1	0	0	0	0	1	0	0	1	4	1	0	1	1	0	0	0	1	0	0	1	0	0	5
" from intestines and stomach	0	1	0	0	0	0	1	0	0	0	1	0	0	3	0	1	0	0	0	0	0	0	0	0	1	0	0	2
" " lungs	0	0	0	1	2	0	0	0	2	0	1	1	0	7	0	0	0	1	2	1	2	0	0	0	1	1	0	8
" " uterus	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	2
Hernia	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	0	0	0	0	0	1	0	0	5
Hydrocele	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Icterus	0	0	0	0	0	0	0	1	0	1	0	0	1	3	0	0	0	0	1	1	0	0	0	1	0	0	0	3
Ileus	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Inanition	0	2	0	1	0	0	1	0	0	1	1	0	0	6	0	0	0	0	1	0	0	1	0	0	0	2	1	5
Inflammation of bladder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" brain	7	5	2	1	1	3	3	4	6	5	3	5	2	47	1	2	3	3	3	7	8	8	3	2	3	5	11	59
" breast	1	0	0	0	1	0	1	0	1	1	0	1	2	8	0	0	1	0	0	0	0	0	0	0	1	0	0	2
" bronchi	8	9	4	0	8	7	7	5	6	4	3	2	3	66	10	3	1	4	4	5	5	4	5	4	2	4	1	52
" diaphragm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
" heart	0	0	0	0	0	0	1	1	1	0	2	0	0	5	0	1	0	0	0	0	1	0	0	0	0	0	0	2
" kidneys	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	2
" larynx	0	0	0	2	0	0	0	0	1	0	0	0	2	5	0	1	0	2	0	1	0	0	0	0	0	0	3	7
" liver	3	0	1	0	0	0	1	0	1	2	0	0	0	8	0	1	0	2	1	0	1	2	1	1	0	0	1	10
" lungs	3	7	12	6	6	10	8	14	11	12	9	10	6	114	6	13	9	7	7	4	15	12	8	9	9	8	5	112
" peritoneum	1	1	0	2	4	0	3	1	1	2	2	2	0	19	1	1	0	2	1	2	0	1	1	2	1	1	1	14
" pleura	0	1	0	0	0	1	1	0	0	0	0	0	1	4	1	0	0	0	1	0	0	0	1	0	0	0	0	3
" salivary glands	0	0	0	0	2	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" stomach and bowels	2	6	1	0	3	4	5	1	3	1	7	3	2	38	4	1	2	2	3	0	3	4	8	4	2	6	4	43
" throat	0	0	1	0	0	0	0	0	0	0	1	1	0	3	0	0	0	1	0	0	0	0	1	0	0	0	0	2
" uterus and ovaries	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1
" veins	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Influenza	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intemperance and exposure	0	1	2	1	0	2	0	1	1	1	1	2	2	14	0	0	3	0	2	4	0	3	0	0	2	0	1	15
Ischuria	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lupus	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Malformation	1	0	0	0	0	1	1	2	0	0	0	1	1	7	0	0	0	0	0	1	1	0	1	0	0	1	1	5
Malignant disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Mania	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2
Mania à potu	1	1	1	0	1	1	1	0	0	2	1	0	0	9	1	0	1	1	0	1	1	1	2	2	1	1	5	17

TABLE OF MORTALITY—*Continued.*—(*1st and 2d Quarters.*)

	January, February, March, 1850.													Total 1st qr.	April, May, June, 1850.													Total 2d qr.
Marasmus	0	3	0	2	0	2	4	2	4	1	1	4	0	23	7	3	4	1	1	4	1	1	2	2	2	5	10	43
Measles	0	2	0	0	1	0	2	1	3	3	4	3	2	21	3	1	1	6	3	5	0	0	3	4	3	3	0	32
Melænia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1
Mortification	1	0	0	0	1	0	0	0	0	1	0	0	1	4	0	0	0	0	0	1	1	0	0	0	2	0	0	5
Neuralgia	1	0	1	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Obstruction of bowels	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Œdema of lungs	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" glottis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Old age	1	3	1	0	3	3	3	4	3	3	2	8	4	38	4	3	4	2	4	1	1	6	6	4	1	4	0	47
Ossification of heart	0	0	1	0	0	0	1	0	0	1	0	0	0	2	0	0	2	0	0	1	0	0	0	0	0	0	0	0
Palsy	1	3	1	2	0	1	4	0	1	0	0	3	2	20	2	0	2	0	1	0	1	0	2	0	1	0	1	14
Perforation of stomach	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Poisoning	0	0	0	0	0	0	1	0	0	0	0	1	0	2	0	0	0	0	0	1	0	1	0	0	0	3	1	7
Phlebitis: phlegmasia dolens	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Prolapsus ani	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Purpura	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Rheumatism	1	0	1	0	0	0	1	0	0	0	0	0	0	4	0	1	0	0	0	0	0	0	0	1	0	0	0	2
Rupture of uterus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Scrofula	2	1	0	1	0	1	0	0	0	1	0	3	1	13	1	1	1	0	0	2	0	1	0	0	1	0	0	2
Small-pox	0	1	0	1	0	0	2	1	0	1	0	0	2	8	1	1	1	0	1	0	0	1	2	0	1	1	0	2
Softening of brain	1	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	1	0	0	0	0	0	1	0	0	1
" heart	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" stomach	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Spina bifida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Still-born	3	4	10	3	9	1	4	9	11	14	5	5	8	86	12	15	7	10	9	7	11	12	14	9	5	9	11	131
Strangulation	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Suffocation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Suicide	1	0	0	0	0	0	0	0	1	0	0	0	1	4	0	3	0	0	0	0	1	0	0	0	0	0	0	1
Syncope	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Synovitis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syphilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Tabes mesenterica	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	1	1	1	0	0	0	0	0	1	1	0	0	3
Teething	1	0	0	0	0	1	1	0	0	0	0	0	0	3	1	1	0	0	0	0	1	1	0	0	1	0	0	3
Tetanus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	3

Tuberculosis	1	0	0	0	0	0	0	0	0	0	1	1	0	3	0	1	0	0	0	0	0	0	0	0	0	0	2	3
Tumor	0	0	0	0	0	1	0	0	0	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Tympanitis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ulcer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ulceration of bowels	0	0	1	0	1	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	2	1	2	1	6
" liver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
" throat	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	1	1	1	0	1	0	0	1	0	1	0	0	6
Unknown	2	1	2	4	2	3	2	0	2	5	2	2	4	31	3	2	4	1	3	2	2	2	5	3	4	3	2	36
Varicella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Varioloid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Whooping-cough	1	1	0	0	0	1	0	1	3	0	3	2	1	13	4	4	1	2	0	0	0	2	1	0	3	2	2	21
Worms	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wounds	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	2
Weekly totals, &c.	121	144	108	96	134	135	154	147	139	154	149	142	135	1758	166	148	150	133	148	162	152	159	171	138	160	171	238	2097
Under 1 year of age	30	34	25	27	44	44	41	37	46	44	33	46	35	486	37	42	40	35	28	32	36	40	30	37	44	59	98	558
Between 1 and 2 years	14	23	8	11	10	14	13	18	12	8	13	8	18	170	21	15	9	10	10	20	19	15	24	10	25	28	39	245
" 2 " 5 "	11	12	14	11	14	20	15	18	14	26	20	20	27	222	28	24	21	25	19	33	24	27	22	17	30	24	18	312
" 5 " 10 "	4	12	9	8	7	6	7	8	11	10	11	4	7	104	10	12	11	11	14	10	7	6	11	11	6	5	13	127
" 10 " 15 "	0	2	2	0	3	1	2	5	3	1	2	1	1	23	2	4	4	2	3	4	2	3	3	3	5	1	1	37
" 15 " 20 "	2	3	4	2	1	5	6	4	5	3	5	3	5	48	2	5	5	3	4	4	4	8	8	6	2	4	5	60
" 20 " 30 "	14	12	15	4	11	13	21	15	11	10	17	12	11	166	12	9	16	13	13	17	15	13	15	9	14	15	19	180
" 30 " 40 "	18	17	9	7	9	3	12	12	10	6	16	15	7	141	9	11	10	11	20	11	12	12	14	14	10	7	14	155
" 40 " 50 "	13	6	8	4	12	10	9	11	6	12	10	10	9	87	11	12	8	8	13	10	11	15	15	11	5	9	6	134
" 50 " 60 "	4	6	5	7	11	7	11	5	5	10	7	5	3	86	11	7	13	5	5	6	6	4	6	8	9	8	11	99
" 60 " 70 "	4	4	2	4	5	4	8	7	7	4	6	4	7	66	9	2	6	2	8	6	8	4	10	6	2	4	5	72
" 70 " 80 "	5	8	5	7	4	5	7	5	6	5	6	3	1	67	11	2	4	4	5	3	7	7	4	6	3	5	65
" 80 " 90 "	2	4	2	4	3	3	1	1	3	3	3	10	4	43	3	2	1	2	6	3	4	3	6	1	1	3	5	40
" 90 " 100 "	0	1	0	0	0	0	0	1	0	0	0	1	0	3	0	1	1	2	1	1	1	2	0	1	1	1	0	12
100 and upwards	0	0	0	0	0	0	1	0	0	2	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	1
From the almshouse	8	11	8	4	2	8	14	10	5	0	11	6	3	90	8	10	13	10	10	11	16	11	13	9	8	7	19	145
People of color	9	6	9	6	3	15	12	13	12	0	19	8	9	121	18	12	8	13	11	16	14	9	14	13	13	18	15	174
From the country	1	0	0	0	0	1	1	5	0	0	5	2	3	18	2	3	1	4	0	1	1	1	2	1	1	3	0	20
Adults	60	58	46	37	55	45	70	57	48	52	65	60	42	695	66	44	60	47	70	59	60	60	73	54	48	50	65	756
Children	61	86	62	59	79	90	84	90	91	104	84	82	93	1063	100	104	90	86	78	103	92	99	98	64	112	121	174	1322

TABLE OF MORTALITY—*Continued.*—(*3d and 4th Quarters.*)

	July, August, September.													Total 3d qr.	October, November, December.													Total 4th qr.	Total for the year.
Abscess	0	0	0	0	0	0	2	1	0	0	1	0	0	4	0	0	1	2	0	0	0	0	1	0	0	0	0	4	14
" of brain	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
" knee	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
" liver	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	3
" lungs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	4	11
" neck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	4
" perineum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
" pleura	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Albuminuria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Anæmia	1	0	0	1	1	1	0	1	1	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	0	1	0	3	16
Angina pectoris	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	5
Aneurism	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Apoplexy	4	3	1	2	1	2	4	2	2	2	2	0	2	27	3	1	1	1	0	2	0	3	1	0	2	0	3	19	97
Aphthæ	1	1	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
Asphyxia	0	0	1	0	1	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0	1	0	6	17
Asthma	0	0	0	0	1	1	0	1	0	0	1	1	0	5	0	0	1	0	0	0	1	2	0	1	0	0	0	4	13
Burns and scalds	0	4	0	1	0	0	0	0	0	1	0	1	2	8	0	0	3	1	0	0	1	2	1	0	1	0	2	14	49
Cachexia	0	0	1	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	2	1	6
Cancer and scirrhus	0	1	0	0	0	0	0	1	0	0	0	2	0	4	0	1	0	2	0	0	0	0	1	1	0	0	0	6	16
" of mouth and face	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0	0	2	6
" mamma	1	0	0	0	1	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
" liver	1	0	1	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	2	7
" pylorus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
" lungs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
" stomach	0	0	3	0	1	0	2	1	2	0	0	0	1	10	2	0	0	0	0	1	0	0	0	0	2	0	0	5	24
" throat	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
" uterus	0	0	0	1	2	0	1	0	1	0	0	1	0	6	1	0	0	0	1	1	0	0	0	0	1	0	1	4	18
Cancrum oris	0	0	0	0	0	0	0	1	0	1	1	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	2	9
Caries	1	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	1	0	0	0	0	1	0	0	0	0	1	3
Casualties	1	11	4	1	1	2	2	1	0	1	0	1	1	26	2	2	3	2	0	0	1	8	1	4	0	0	3	30	79
Child-bed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Cholera	1	2	0	1	1	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
" infantum	58	66	60	40	52	44	36	28	24	15	4	5	4	436	5	2	0	0	0	0	1	0	1	0	0	0	0	9	505

Cholera morbus	6	2	0	1	2	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	0	0	0	0	0	0	0	1	24
Colica pictonum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2
Colic	1	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	1	0	0	2	5
Compression of brain	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Concussion of brain	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Congestion of brain	6	2	6	4	6	3	1	5	1	4	1	2	1	43	4	1	2	1	1	1	2	2	1	2	2	0	1	20	97
" heart	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
" lungs	1	0	3	0	1	1	0	1	2	0	1	0	1	11	0	2	1	2	2	1	0	1	1	3	1	0	1	15	58
Consumption of lungs	12	19	11	21	22	12	16	12	17	17	15	11	18	214	20	20	17	11	12	19	16	17	20	13	25	19	23	232	907
Convulsions	15	12	17	16	17	10	15	8	7	10	4	8	9	148	10	9	6	5	6	8	2	4	5	7	11	2	11	68	444
" puerperal	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	0	0	0	1	0	1	0	0	0	0	0	2	8
Croup	2	1	1	2	3	0	2	1	2	2	2	1	0	19	1	3	2	3	9	3	11	1	3	4	5	4	4	53	143
Coup de soleil	0	1	0	2	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Cyanosis	2	1	0	2	0	1	1	0	0	1	1	0	0	9	1	1	0	0	1	0	0	0	1	0	0	0	1	5	22
Debility	5	3	1	6	7	13	7	4	2	5	5	4	6	68	0	1	8	3	4	1	2	2	2	3	7	5	3	41	201
Dementia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Diabetes	0	0	1	0	0	0	0	0	0	1	1	0	0	3	0	1	0	0	0	0	1	0	0	0	0	0	0	2	6
Diarrhœa	10	10	12	14	10	15	17	8	7	8	7	2	5	125	3	3	4	4	1	2	3	1	3	4	1	4	0	33	208
Disease of brain	4	2	5	2	3	0	3	0	2	3	2	2	1	29	1	0	0	1	1	1	0	1	1	1	2	1	0	10	88
" bowels	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
" elbow	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
" heart	1	2	0	2	1	3	2	1	0	1	0	4	3	20	1	1	1	2	0	2	1	3	2	4	2	1	2	22	101
" hip	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
" kidney	0	0	0	1	0	0	0	0	1	1	0	0	1	4	0	0	1	1	0	1	1	0	0	0	0	0	0	4	9
" liver	0	0	1	0	0	0	1	1	1	2	0	0	0	6	2	0	0	2	0	0	1	0	0	0	0	1	0	6	22
" lungs	1	2	1	0	0	1	1	0	1	1	0	1	2	11	0	1	1	1	0	0	0	1	0	0	0	0	0	4	32
" scrotum	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
" spine	0	0	0	1	1	0	0	1	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1	8
" spleen	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
" stomach and bowels	0	0	4	3	3	1	0	0	1	1	0	1	0	14	0	3	1	0	1	0	1	0	1	0	0	0	1	8	27
" throat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	3
Dropsy	4	0	1	5	3	0	3	3	1	1	6	2	1	30	1	2	5	1	1	5	1	3	1	1	4	4	2	31	116
" abdominal	0	1	0	0	0	0	0	0	1	0	0	0	1	3	2	0	1	0	0	1	2	1	1	0	1	0	0	9	28
" of breast (chest)	0	1	0	0	2	1	1	1	1	0	0	0	0	7	2	1	0	2	2	3	1	1	1	2	0	2	0	17	63
" head	9	6	8	7	11	6	16	8	8	8	8	2	5	102	2	3	3	2	5	0	5	5	0	4	0	1	2	32	283
" heart	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	1	0	0	0	0	0	0	4	16
" ovary	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	3
Drowned	3	7	3	6	4	7	4	1	2	6	0	2	0	45	4	0	1	1	2	2	0	0	0	1	0	0	1	12	94

TABLE OF MORTALITY—*Continued.*—(*3d and 4th Quarters.*)

	July, August, September, 1850.													Total 3d qr.	October, November, December, 1850.											Total 4th qr.	Total for the year.
Dysentery	14	18	18	9	31	31	27	23	21	16	17	18	11	254	14	11	6	7	18	5	6	6	3	1	3	3	3	86	421
Dysmenorrhœa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Dyspepsia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Effusion on brain	2	3	3	0	3	1	5	4	2	0	3	3	1	30	0	1	2	1	2	1	2	1	0	1	1	0	1	13	74
" lungs	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Emphysema of lungs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Enlargement of heart	6	1	0	2	0	2	0	1	0	0	0	0	0	6	0	0	0	0	1	0	1	0	1	1	0	1	0	5	18
" liver	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4
" spleen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
" ovary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Epilepsy	1	0	0	1	1	0	0	0	1	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	1	2	0	3	14
Erysipelas	1	0	1	1	0	0	0	1	0	1	0	0	1	5	0	0	1	2	0	0	1	0	2	2	0	1	4	1	2	17	53
Excessive heat	0	0	0	0	3	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Fever	0	2	0	0	1	0	0	2	0	2	2	0	1	11	0	0	0	0	1	0	1	0	0	0	0	0	1	3	22
" bilious	0	0	0	0	0	0	0	2	0	0	3	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	4	15
" catarrhal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
" congestive	0	0	0	2	1	0	0	1	0	1	1	0	0	6	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3
" continued	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0	0	8	17
" hectic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
" intermittent	0	0	0	0	1	0	0	0	1	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
" nervous	0	0	0	0	2	0	1	0	0	0	2	0	0	7	0	0	1	0	0	0	1	0	0	0	1	0	0	4	15
" puerperal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
" remittent	0	1	2	1	2	1	0	0	0	0	1	0	0	8	1	0	1	0	0	0	0	0	0	0	1	2	1	8	30
" scarlet	3	0	2	0	1	0	0	2	4	0	0	1	4	17	1	0	2	3	1	0	0	1	0	0	0	3	0	0	35
" typhoid	7	12	4	5	0	4	2	2	2	6	4	0	2	50	2	3	3	6	14	3	8	8	4	7	4	7	12	6	85	439
" typhus	3	1	1	3	1	2	0	3	4	5	3	2	2	30	6	5	3	3	2	2	1	0	0	4	1	3	2	2	33	105
Fistula	0	1	0	0	1	1	2	1	1	1	1	3	4	16	1	3	2	1	0	0	1	1	1	1	4	4	0	1	17	69
Fracture	0	0	0	0	1	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
" of skull	0	0	0	1	0	0	1	0	0	0	0	0	1	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	5
Fungus hæmatodes	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	5
Gangrene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
Gout	2	0	0	0	1	0	0	0	0	2	0	0	1	6	1	0	0	0	2	0	0	0	2	0	0	2	0	1	10	20
Hemorrhage	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	0	0	0	0	0	0	0	0	0	0	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12

Hemorrhage from intestines and stomach	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	1	0	4	9
" " lungs	0	0	1	1	0	0	0	0	0	1	0	2	0	5	0	0	1	0	0	1	0	2	0	0	0	0	0	4	24
" " uterus	0	0	1	0	1	0	0	0	0	1	1	1	0	5	0	1	0	0	0	1	0	0	1	0	0	0	0	3	11
Hernia	1	0	2	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	1	0	0	1	0	0	0	3	12
Hydrocele	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Icterus	1	0	1	1	0	1	1	1	0	0	1	0	0	7	0	0	0	0	1	0	0	0	0	0	1	1	1	4	17
Ileus	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	1	1	0	0	0	0	1	5	8
Inanition	2	3	1	4	2	0	1	1	2	1	0	2	1	20	0	1	2	0	1	1	0	0	1	0	1	1	0	8	39
Inflammation of bladder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	2
" brain	4	11	4	5	4	6	11	7	7	3	7	4	2	77	2	2	2	3	4	4	0	1	5	4	3	1	4	35	218
" breast	0	1	0	0	0	1	0	0	0	0	0	0	0	2	1	0	2	0	0	1	0	1	0	1	0	0	0	6	18
" bronchi	5	2	2	4	0	1	2	1	3	3	1	3	1	28	2	5	6	2	3	2	3	4	5	1	3	4	5	46	191
" diaphragm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
" heart	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	2	1	5	13
" kidneys	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	1	6
" larynx	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	0	0	1	0	1	0	0	0	2	0	4	1	9	23
" liver	0	1	1	1	0	2	2	1	1	0	1	1	3	14	1	0	0	0	0	0	0	0	1	2	0	1	0	5	37
" lungs	8	6	1	3	6	5	5	1	4	6	4	5	3	57	2	2	8	2	4	11	2	7	2	4	8	8	9	69	352
" peritoneum	0	0	0	0	1	0	2	1	0	4	2	0	1	11	4	1	1	1	0	0	2	0	2	1	1	3	2	18	62
" pleura	0	0	0	0	0	1	0	0	2	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11
" salivary glands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2	5
" stomach and bowels	9	5	2	9	8	5	4	4	10	3	3	5	1	68	6	3	6	4	2	4	2	0	2	3	0	0	6	38	187
" throat	0	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	1	0	0	0	1	0	0	0	1	3	10
" uterus and ovaries	1	1	0	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	1	0	1	0	2	8
" veins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Influenza	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Intemperance and exposure	1	1	0	1	1	1	2	0	0	2	0	0	0	9	1	1	0	1	2	1	1	1	1	0	1	4	1	15	58
Ischuria	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lupus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Malformation	1	2	1	1	1	0	1	3	1	0	0	1	1	13	3	0	0	0	1	0	0	0	1	0	1	0	2	8	33
Malignant disease	0	0	0	0	0	0	0	0	0	1	1	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Mania	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	1	5
Mania à potu	2	2	0	2	1	1	0	0	0	0	2	1	2	13	2	2	3	1	0	1	1	0	0	0	2	1	2	15	54
Marasmus	10	7	16	8	15	9	13	5	12	10	7	5	5	114	13	1	6	3	1	0	3	1	3	2	3	0	1	37	217
Measles	2	2	0	2	0	3	0	1	0	0	0	0	0	10	0	1	0	0	0	0	0	0	1	1	2	1	0	6	69
Melænia	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Mortification	0	0	0	1	2	0	0	0	0	0	1	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	1	14

TABLE OF MORTALITY—*Continued.*—(*3d and 4th Quarters.*)

	July, August, September, 1850.													Total 3d qr.	October, November, December, 1850.													Total 4th qr.	Total for the year.
Neuralgia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0		1	5
Obstruction of bowels	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	3
Œdema of lungs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2
" glottis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Old age	6	3	3	3	5	4	9	4	0	7	2	4	4	54	7	2	4	4	4	2	4	5	2	3	3	3	46	185
Ossification of heart	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Palsy	1	1	1	1	3	1	2	0	3	2	0	1	1	17	2	1	0	1	5	0	0	2	3	3	1	2	20	71
Perforation of stomach	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Poisoning	1	0	0	0	0	0	1	0	1	0	0	1	0	4	0	1	0	0	0	0	0	0	0	0	0	0	1	14
Phlebitis: phlegmasia dolens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Prolapsus ani	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Purpura	0	0	0	1	1	0	0	1	1	0	1	0	0	5	0	0	0	0	0	0	0	0	0	1	1	0	3	9
Rheumatism	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Rupture of uterus	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	2
Scrofula	1	2	0	2	1	1	1	1	1	0	1	1	0	12	0	0	0	2	3	1	3	1	2	2	1	1	16	57
Small-pox	4	1	2	4	0	0	0	1	1	0	1	0	0	13	0	0	0	0	0	1	0	0	0	0	2	4	8	40
Softening of brain	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	0	1	0	0	0	1	0	0	0	0	1	4	10
" heart	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
" stomach	0	0	0	0	0	1	0	1	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Spina bifida	0	1	0	0	0	0	0	0	0	0	1	1	0	3	0	0	1	0	0	0	0	0	0	0	0	0	1	4
Still-born	13	6	17	6	11	7	4	10	11	11	12	6	8	122	9	5	10	6	9	8	8	10	13	6	10	5	15	114	453
Strangulation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Suffocation	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	1	0	0	0	2	0	0	0	0	3	8
Suicide	1	0	0	0	1	1	1	1	0	0	0	0	0	5	0	0	0	0	0	0	1	1	1	0	0	1	5	20
Syncope	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Synovitis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Syphilis	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Tabes mesenterica	1	1	0	1	0	0	1	2	1	1	2	0	1	11	0	0	0	0	0	0	2	1	0	2	0	0	5	25
Teething	0	1	1	0	0	1	1	0	3	3	1	1	0	12	0	1	0	0	0	1	0	0	0	0	0	0	2	23
Tetanus	0	1	0	1	0	0	0	0	1	0	1	0	0	3	1	0	1	0	0	2	0	0	0	0	1	0	5	11
Tuberculosis	1	1	0	1	0	1	0	0	0	0	1	0	0	5	0	0	1	0	1	0	0	0	1	1	1	0	5	16
Tumor	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Tympanitis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1

Ulcer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Ulceration of bowels	0	0	2	0	0	0	0	0	1	1	0	2	0	6	0	1	1	0	0	0	0	0	0	1	1	0	0	4	19
" liver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
" throat	0	0	1	0	0	0	1	1	0	0	0	0	0	3	0	0	1	0	1	0	0	0	0	2	0	2	0	6	17
Unknown	4	3	5	8	5	3	2	3	2	0	1	3	1	40	0	1	4	1	5	3	2	0	7	5	5	2	5	40	147
Varicella	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3
Varioloid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Whooping-cough	2	4	5	6	4	4	9	0	7	3	9	2	2	60	3	2	2	2	1	1	3	0	2	1	3	3	0	23	117
Worms	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Wounds	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Weekly totals, &c.	264	279	254	248	285	241	262	187	215	201	166	146	134	2882	180	126	139	120	121	142	129	113	131	118	156	137	139	1756	8488
Under 1 year of age	127	121	124	97	98	84	77	71	65	50	47	45	35	1041	50	28	32	28	41	39	26	32	43	28	44	29	48	468	2553
Between 1 and 2 years	34	43	36	36	56	43	53	29	40	35	26	15	16	472	17	17	12	15	12	12	15	9	9	6	18	11	12	165	1052
" 2 " 5 "	17	20	12	15	18	21	30	16	24	29	16	13	6	257	10	6	17	12	12	12	14	6	16	13	14	14	13	159	950
" 5 " 10 "	6	10	16	10	6	8	7	6	7	5	10	4	5	100	7	5	6	6	6	12	4	6	6	2	11	8	8	89	418
" 10 " 15 "	4	10	3	3	6	11	0	5	5	2	3	3	1	56	1	4	0	0	4	4	2	1	2	2	2	2	4	28	144
" 15 " 20 "	5	7	7	4	8	4	3	3	3	5	5	2	4	60	3	4	1	5	4	4	2	3	2	3	7	4	2	44	212
" 20 " 30 "	16	22	9	12	21	15	18	15	18	14	14	18	16	208	20	12	17	18	12	15	13	11	14	13	15	19	12	191	745
" 30 " 40 "	10	14	17	23	23	22	22	9	12	19	13	17	16	237	19	18	17	5	3	19	13	16	10	10	12	15	14	171	704
" 40 " 50 "	15	7	10	14	13	9	20	9	4	15	12	9	13	150	16	8	15	9	8	12	19	17	8	15	14	12	8	161	532
" 50 " 60 "	10	7	10	11	12	2	8	8	11	6	7	8	5	105	13	13	9	9	5	2	8	8	5	10	8	11	9	110	400
" 60 " 70 "	10	7	6	12	15	7	12	8	12	9	5	5	8	116	9	6	6	10	6	3	6	5	7	8	4	5	5	80	334
" 70 " 80 "	7	9	4	5	5	11	6	4	9	4	4	4	4	76	9	4	3	2	5	5	6	4	6	3	3	4	3	57	265
" 80 " 90 "	1	*	0	4	3	3	5	2	5	7	4	1	8	43	6	0	4	0	3	2	0	5	2	4	4	2	1	33	159
" 90 " 100 "	2	0	0	0	1	1	1	2	0	1	0	2	2	14	0	1	0	1	0	1	1	0	1	1	0	1	0	7	36
100 and upwards	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
From the almshouse	16	18	13	20	24	14	15	11	13	13	16	14	15	203	18	9	14	7	12	11	9	3	7	10	12	10	7	129	566
People of color	25	26	15	19	23	13	8	7	14	17	12	15	7	201	10	9	12	4	7	9	4	3	4	5	7	12	6	92	588
From the country	6	4	6	5	3	10	7	5	5	4	2	3	13	63	4	1	2	1	0	0	9	3	1	0	2	1	4	33	136
Adults	71	66	56	83	93	70	92	57	71	75	59	64	67	924	92	62	71	54	42	59	66	56	55	67	60	69	52	803	3068
Children	193	215	198	165	192	171	170	130	144	126	107	82	67	1966	88	64	68	66	79	83	63	57	78	59	96	68	87	966	5324

* Two bodies were found after a conflagration, the age, color, or sex of which could not be ascertained.

EPIDEMIC DYSENTERY AMONG THE ORPHANS AT GIRARD COLLEGE.

Dr. HOLLINGSWORTH stated that a severe epidemic of diarrhœa and dysentery had recently prevailed among the Orphans at the Girard College. It commenced on the fourth day of last month, since which time upwards of one hundred cases had occurred; namely, twenty-five of dysentery, and the remainder of diarrhœa with slight dysenteric symptoms. Three of the cases of dysentery terminated fatally, and one death from convulsions occurred in a patient who had passed through the disease.

In the first of the fatal cases, the attack commenced on Tuesday the 15th of July, and terminated in death on the succeeding Saturday. The discharges in this instance were very frequent; the pulse was exceedingly rapid; there was also considerable nervous excitement. The child had always, however, when in health, exhibited great excitability. Towards its close, the case assumed somewhat the features of cholera.

The second fatal case ran its course in two days and a half, and the third in ten days.

The child who died of convulsions had been convalescent during from seven to ten days. He had been put on the use of quinine with tannin; his stools had become natural in appearance; for the last two days he had had no evacuations. This circumstance was not reported to the attending physician. Yesterday morning, after partaking of a light breakfast of tea and toast, he suddenly complained of a loss of sight, and soon after was seized with convulsions. He was ordered injections, per anum, of warm water, and a mixture of oil and turpentine by the mouth. Copious alvine evacuations were procured. The convulsions, however, continued with no interval of consciousness, and he shortly afterwards expired. Upon a post-mortem examination, no adequate cause of death could be discovered. The colon was loaded with fecal matter, and in this intestine as well as in the cœcum were traces of preceding inflammation. The brain was not examined.

Few of the patients had much sickness of stomach, nor were any of them affected with tympanitis; their tongues were, in general, clean. In those who recovered, convalescence proceeded very slowly.

All the cases of diarrhœa were treated by oil and laudanum—rest in bed, and a diet of arrow root. Under this treatment all of them recovered.

In the cases of dysentery, the patients were placed, for the first two or three days, on calomel and Dover's powder, followed by sugar of lead and opium. Rochelle salt and laudanum were tried in three cases: at the end of three days, finding the patients getting worse, they were discontinued. Nitrate of silver combined with opium was also given a trial. Depletion and counter-irritation by blisters were ordered in a few instances, but no benefit was derived from the use of either of them. The treatment by calomel and Dover's powder, followed by sugar of lead and opium, was most relied upon, and proved in the end the most satisfactory. Emollient enemeta of starch and laudanum, lard and laudanum, &c., in all instances were ordered during the first stage of the disease. Generally they gave but little satisfaction, as they were soon rejected, and often had to be discontinued, from the pain and distress they produced. In the more advanced stages of the complaint, injections of sulphate of zinc and of nitrate of silver were tried in several instances, but with no decided benefit. Arrow root constituted the diet for the first few days. When more support was required, mutton soup, milk punch, &c., were given. Ice was allowed to all.

No local cause could be discovered, to which the origin of the epidemic could be attributed. There is a pond of fresh water within two squares of the College buildings, where the boys are accustomed to bathe. The sleeping apartments are spacious, and most of them well ventilated; the temperature of the interior of the main building is considerably lower than that of the atmosphere out of doors, but to none of these causes, was it thought, could the extensive prevalence of the disease be attributed.

Two of the domestics employed in the College were attacked with dysentery. One of them was removed to-day to St. Joseph's Hospital. The wife of the President has also been taken sick.*

* Dr. H. regrets to state that this case has terminated fatally. The lady left Philadelphia the morning succeeding the night of her attack, on a visit to some members of her family at Bellefont, near which place, after ten or twelve days' severe illness, she expired. The domestic mentioned as being removed to St. Joseph's Hospital also died. She was sent there immediately on being taken sick.

With the view of arresting the epidemic, some two hundred and fifty of the orphans have been sent a few days in advance of their expected vacation to the homes of their relatives. The epidemic has also made its appearance at the Orphan Asylum, situated upwards of a mile south of the College.

To Drs. Pepper and Page, Dr. H. stated that his colleague and himself were much indebted for valuable advice and assistance rendered on several occasions during the prevalence of the epidemic.

Dr. CONDIE did not think that it was to local causes alone that we were to look for the production of the dysentery among the orphans at Girard College. There was evidently a general morbific condition of the atmosphere predisposing to that disease. He had met with it very frequently, in both children and adults, during the last two months. It prevails, certainly, to a very great extent in the Southern districts. On referring to the returns made to the Board of Health of the interments of the city and liberties, he found that, during the month of June, fifty deaths were reported from dysentery, and during the month of July, ninety-eight; total, 148. In the cases that have fallen under his notice, the disease has varied very much in the severity of its symptoms. In many, it was very slight, and gave way readily to the simplest treatment, whilst, in others, it was very severe and obstinate, and occasionally proved fatal, even under the most vigorous treatment, commenced at the very onset of the attack. The disease was in nearly all the cases attended with fever. In some, however, the fever was very slight, and of short duration; in others, it was more intense, and continued until the termination of the attack. In a number of cases, it assumed the characteristics of remittent fever, with two exacerbations in the course of the day. The tormina and tenesmus were, in many cases, peculiarly severe and almost continuous. The pulse varied very much in different cases: it was mostly quick and frequent, and small in volume, and often tense. Occasionally, however, it was somewhat full and soft; seldom slow and languid, excepting in cases where, by the long continuance and violence of the attack, the strength of the patient had become considerably exhausted. The tongue, in many cases, was clean and red; in some, however, it was coated, especially

along its centre, with a dirty white, or yellowish fur. The stomach was, in the greater number of cases, very irritable. Nausea was generally present, while spontaneous vomiting of a fluid colored with bile was not unfrequent. More commonly, however, the vomiting only occurred upon medicine or drinks being taken into the stomach. Many patients complained of a soreness, some of actual pain of the abdomen. Tenderness of this part was very commonly indicated upon slight pressure being applied. The discharges from the bowels were very various. In some cases, after severe and prolonged straining, a small quantity of mucus, more or less stained with blood, was passed. In other cases, the discharge was of a jelly-like consistence, either entirely colorless, mixed with blood, or of a dark slate color. The discharges were often frothy. Pure blood, with a very slight admixture of mucus, was voided in some cases, and occasionally the hemorrhagic stools were frequent and profuse. The cases in which these latter occurred were always protracted and unmanageable, often fatal. The stools had, in general, a peculiar odor, more marked in some cases than in others. The disease, when of any severity, run, in general, a protracted course. Convalescence was, also, slow and tedious.

In regard to treatment, Dr. Condie remarked that in no case had he administered, either in the commencement or during the continuance of the disease, the usual prescription of castor oil, with or without the addition of laudanum. He believed that all purgatives, even the mildest, were calculated to increase the tormina and tenesmus, by the irritation they produced in the inflamed coats of the intestines, while he knew of no urgent indication they were calculated to fulfil. He was equally averse from the employment, in dysentery, of injections. He has seldom seen them produce, even when of an anodyne and emollient nature, more than temporary relief. These views in relation to the employment of purgatives by the mouth, and injections into the rectum, in cases of dysentery, he was happy to find adopted by many of the best practitioners of Europe. He believed that by far the most rational and effective plan of treatment in dysentery, was to arrest the abnormal action of the intestines; "to put them in splints," to use an expressive phrase of the late Dr. Parrish, by the administration of opiates and astringents. Dr. Condie had been much pleased by the effects of the nitrate of

silver in dysentery. He gave it in the dose of one-fourth of a grain, combined with from one-third to one-half of a grain of opium, every three hours to an adult, during the day, and at night a pill composed of from one to one grain and a half of opium, one grain of ipecacuanha, and five grains of the extract of gentian. To children over four years of age, he has given one-sixth of a grain of the nitrate of silver, and the same quantity of opium, every three hours, with three grains of Dover's powder at night. In those cases attended by bloody discharges, he prefers the acetate of lead to the nitrate of silver, in doses of one grain, combined with from a third to one-half a grain of opium every three hours, for an adult, and with a proportionally smaller amount of opium for a child. Dr. Condie was formerly of the opinion that opium could not be administered with safety in the earlier stages of dysentery; experience has convinced him, however, that the earlier it is resorted to, in doses adapted to quell the tormina and tenesmus, the quicker will the disease be cut short.

Perfect rest in a recumbent position is all important in every case of dysentery; the more, also, the patient resists the calls to stool, the better; children especially should not be allowed to rise every time they desire, nor should they be allowed to sit for a long period, ineffectually straining to obtain an evacuation from their bowels.

Warm fomentation to the abdomen with a strong decoction of hops, or soft emollient poultices to this part, have appeared to him to give great ease to the patient. To do good, however, they must be properly applied, and continued for a length of time without intermission.

Bleeding from the arm he has found beneficial in many cases. In cases occurring in robust adults, with intense tormina and tenesmus, decided febrile reaction, a quick, frequent, and tense pulse, he has known the loss of a moderate quantity of blood to be followed by prompt and decided relief. Where there has been much soreness or tenderness of the abdomen, cups to this part he has often found beneficial. Blisters to the abdomen Dr. C. has occasionally resorted to, and in a few cases they have appeared to act beneficially. He cannot say, however, that their good effects, in the generality of cases, were of so decided a

character as to compensate for the discomfort invariably produced by their employment.

When the tenesmus and tormina have considerably abated, and the discharges have become less mixed with blood, Dr. Condie has been accustomed to administer, at night, five grains of the blue mass and one grain of opium, which he has generally found to occasion dark consistent discharges, soon followed by natural stools.

During the height of the disease, there is seldom any desire for food, nor should any be allowed. Cold water, or cold toast-water, slightly acidulated with lemon juice, may be given to allay thirst. Fresh buttermilk is often very agreeable to the patient, and he may be allowed to partake of it in moderation.

Dr. WARRINGTON presented the following account of the facts connected with

THE DELIVERY OF THE DOUBLE MONSTER PRESENTED BY HIM TO THE CABINET OF THE COLLEGE.

Barbara Archibald McDonald, aged 28, patient No. 1638, of the Obstetric Institute, applied to me, at the office of the Philadelphia Dispensary, desiring the aid of the Institution, as she had been for several months suffering from much pain and distress in the side, which occurred after a fall during a fainting fit in the early part of her voyage from Ireland to this country. At the time of her interview with me, January 9th, 1851, at which period she supposed she had nearly completed the term of her third pregnancy, her abdomen was very large. She had general œdema, particularly in the lower extremities, and beside the pain in the right hypochondrium. She experienced a sensation of great distress in the left iliac and inguinal region, with a numbness and torpor of the left limb.

About six o'clock in the morning of the 27th of the same month, she was attacked with labor pains, and sent for my pupil, Dr. J. Pembroke Thorn, of Stevensburg, Va., to whose charge she had been previously assigned. He found the os uteri dilating favorably, and, shortly afterwards, four feet presenting in the vagina. Failing in his effort to retard the descent of a pair which he supposed must belong to one child, he requested my attendance with him. Before the limbs had descended as low as the nates, I saw the patient. The first impression on my

mind was the same as that received by Dr. Thorn, that twins presented the pelvic members simultaneously, and that the uterus above was acting with equable force on each of the bodies. I therefore only at first repeated the attempt of Dr. Thorn, to retard the descent of one body, by supporting it with an upward pressure, in the hope that the contractions of the womb would be sufficient to force the other down. Observing soon that such a result did not take place, it was decided to continue to pass one set of members upwards, while some force was employed to draw upon the other, but without any good effect. It was therefore deemed advisable to make cautious traction on all four of these pelvic members, at the same time, moderately, in the hope that, should the trunks descend together, it might be possible for us to get down one head upon the other neck, and thus avoid the embarrassment anticipated in the engagement of the two heads in the cavity simultaneously.

The two pelves and the trunks then gradually descended, the bodies being small. Just as the umbilici, when in juxtaposition, emerged at the vulva, and when the hand was about to be carried up for the purpose of getting down a long loop of the cords, it was discovered that it was impossible to get the fingers between the bodies. The cord, for it may be said to be a single one, or at least the two were included in a tunic, which invested them somewhat closely, was found on the posterior surface of the vagina, and was partially drawn down, the bodies were also brought lower, and it was then obvious that they were joined together at the thorax. The arms were brought out by the aid of the finger without much embarrassment, and not much traction was needed to cause the apparently single head to clear the inferior strait. The mass of the placenta followed spontaneously in less than five minutes.

The patient's condition was good for three days after the delivery. Her milk was freely secreted, and as her education and manners, as well as her personal appearance, would have made her acceptable as a wet nurse in any family competent to make her ample remuneration, care was taken for some time to keep the breasts active.

About the 5th day, she complained of pain in the left inguinal region, and down the left leg, which soon became swollen and difficult of motion.

From this she recovered in a few weeks.

Stated meeting, September 2d, 1851.

Dr. MEIGS, Vice President, in the Chair.

Present twenty-three members.

Dr. PARRISH presented and read the following communication, embracing the substance of the remarks made by him at the last meeting of the College, with revisions and additions.

MORTALITY AND INSANITY IN SEPARATE PLAN PRISONS IN ENGLAND AND AMERICA.

In the *London Lancet* for June, 1851, will be found an abstract of a paper on prison discipline, read before the London Medical Society by Dr. Forbes Winslow, which, with the discussion upon it, forms matter for profitable reflection and comment.

Dr. Winslow believes, and we think with good reason, that the study of the great problem of crime and its punishment comes peculiarly within the province of physicians, who, as a class, are better qualified than any others, both from their education and pursuits, to grapple with them. With these views, Dr. W. appears to have carefully investigated the recent improvements in the construction and management of prisons in England, in order, if possible, to arrive at some definite conclusions as to their actual effects on the moral and physical condition of convicts.

His statistics possess unusual interest, when viewed in connection with those obtained from the prisons of this city and county; and in this light I propose to regard them.

It is known to the fellows that the plan of separate confinement, which originated in Pennsylvania, has been partially adopted in England, as well as in some parts of the continent of Europe; and it is to this class of prisons that the inquiries of Dr. Winslow are directed. In order, however, to draw a just parallel between the separate prisons of England and our own, it will be necessary to present some of the points of difference between them; and to sketch as briefly as possible the main features of the plans now in operation in the two countries.

Our Pennsylvania system has been both highly lauded and severely condemned; and in the discussions in regard to it, a degree of acrimony and uncharitableness has been engendered akin to that which too often marks sectarian and political controversies, and which is altogether unfavorable to the development of truth. It is the province of the physician, looking at this question as a medical and philosophical one, to free himself from all undue bias, and to view it in the light of facts alone.

Regarding the origin of the system of separate (or, as it was originally denominated, solitary) confinement, all must admit that the motives of the men who projected it were eminently philanthropic. They were amongst the most benevolent and public-spirited citizens of Pennsylvania, men of pure lives and honest hearts.

Seeing the utter failure of the old and vindictive methods of punishment to reform bad men, and considering this as the paramount object of penal law, they naturally sought for something higher and better. More than a century and a half ago, the wise founder of our State had taught that the reformation of the offender should be the grand object of punishment, and that cruelty and vengeance, which had entered so largely into the penal code of the Old World, should be swept away before the advancing tide of a purer gospel. Acting upon this sentiment, the original penal code of Pennsylvania was far milder than that of the Mother Country, or even of the other colonies, and under the mild sway of Penn, prisons were houses of correction rather than bastiles for executing vengeance. Nor was the example of the founder wholly lost upon succeeding generations. What was then rather a peculiar idea is now the popular sentiment in the most enlightened States.

It was in furtherance of the grand idea of reformation and correction of offenders that the plan of separating them from each other during their incarceration was conceived and carried out. The bad influence of their promiscuous intercourse in crowded rooms and workshops had been abundantly verified. It presented, in fact, an insurmountable obstacle to reformation, and was, in many instances, a direct cause of increased moral contamination, especially to the young and uninitiated.

To counteract this, entire separation, both by day and night, was offered as a substitute. It was believed that solitude would

furnish a strong incentive to moral renovation. That the convict, shut out from society, with every motive to deception and to the indulgence of his passions taken away, without external objects of interest or amusement upon which his mind could rest, with no books but those of a serious kind; and deprived of a knowledge of the stirring events which were transpiring in the busy world around him, his thoughts would necessarily turn to the errors and crimes of his past life, which, as he looked back upon them, would lead him to deep contrition, and it might be to sincere penitence.

It was believed, too, that, by exclusion from the public gaze, and from his fellow-prisoners, he might emerge from his solitary cell, at the expiration of his term, and go out into the world without having the brand of the convict fixed upon him, and thus be enabled to commence anew the struggles of life. Plots of mischief and rapine laid within the prison walls, to be executed by trained bands, grown old in crime, after their discharge, would thus be prevented, and the public security be thereby promoted.

These were some of the considerations which impelled many of our fellow-citizens to give their hearty support and co-operation to a new and then untried method of prison discipline. The plan seemed feasible: it held out the flattering prospect of reforming vicious and dangerous men, not by bayonets, stripes, shower baths, or other physical torture, but by the gradual softening influence of solitude, combined with moral and literary instruction. The early advocates of the system were divided on the question of introducing labor into the prison, some of them even supposing that occupation might amuse and distract the mind, and thus lead it off from serious reflections; but this idea was overruled by the more sagacious, and daily labor was, from the first, made a part of the scheme. Different opinions prevailed also in regard to the amount of intercourse which should be permitted between the prisoners and their officers, visitors, &c., as well as upon some other details of the plan.

The separation and non-intercourse of the prisoners, under any circumstances, were, however, agreed upon by all parties, and constituted the cardinal feature of the system. This was made the basis of a revised penal code, which was adopted by the Legislature at its session in 1829, and has since been the law

of the Commonwealth. Each prisoner is now sentenced to "solitary or separate confinement at labor" for a term corresponding with the gravity of his offence, or of the circumstances under which it was committed.

The introduction of this system involved, of course, the erection of new and costly buildings adapted to the end in view. The chief object being to isolate each occupant from his fellows, separate cells were constructed, facing upon lofty arched corridors, which radiated from a central hall. These cells are separated from each other by massive walls 14 feet long and 7½ wide; the light is admitted from above through a skylight 22 inches long by 4 in width, and ventilation is effected by an opening in the top of the cell, which may be opened or closed at the discretion of the prisoner.

A cess pipe occupies a corner of the apartment; and across it pass two iron rods for the conveyance of heat. A double door, the inner of firm iron grating, and the outer of thick wood, guards the front and rear opening of the cell. The floors of most of the cells are of plank upon a firm joice laid on cement, while some others are of stone. To each cell is attached a yard of the same size, enclosed by a massive wall 11 feet high, to prevent intercourse during the hour devoted to exercise.

A room thus constructed, without open doors or windows, and surrounded by a wall 11 feet high, with no other opening for sun light than through a narrow skylight at the top, and with imperfect means of ventilation, and this in a great measure under the control of its occupant, must be somewhat damp, and oftentimes offensive, especially when used alike for work, eating, sleeping, and, in fact, for all other purposes. In this apartment the prisoner is strictly confined at labor, one hour of each day being allowed for exercise in the cell yard, unless evidences of ill health or mental disorder induce the physician to direct a relaxation of the discipline.

Each block contains about 34 cells on each side of the hall, and is under the care of an overseer, who is obliged to inspect the condition of each prisoner at least three times daily, and to superintend his work. The warden, overseers, physicians, official visitors, and members of the acting committee of the Prison Society are the only persons allowed to hold intercoure with

the prisoners. Until recently, the principal trades pursued in these cells were weaving, shoemaking, and bobbin winding.

Without entering farther into the details of the separate system, it may be remarked that it was carried into effect in Pennsylvania, under the most flattering auspices, in the year 1829, and has since been in full operation in the State prisons at Philadelphia and at Pittsburgh, and more recently in several of the county prisons in the interior. The prison at Philadelphia was opened in the 10th month (October), 1829, and soon attracted a large share of attention from philanthropists, statesmen, jurists, and from the public generally. The order, decorum, and quiet which reigned within its walls; the absence of the sad spectacle of human depravity and wretchedness, which meets the eye in the thronged apartments of prisons conducted on the old plan, excited general admiration. Commissioners from England and France were sent out to visit it, and returned to their respective countries with the most favorable reports.

These evidences of regard naturally excited a degree of State pride, and induced Pennsylvanians generally to feel themselves identified with a movement which originated in their State, and which promised to effect a most desirable reform in penal law over the world.

If any had doubts of the harmony of the plan with the laws which govern the human frame; or imagined that close and long-continued confinement in cells, such as have been described, would breed disease and death; or that in strict seclusion from society the mind would feed upon its own thoughts until it became morbid and deranged—they silenced their fears, and determined to await the results of experience.

The institution was placed under the charge of five inspectors. It was officered with an efficient and humane body of men, fully impressed with the importance of the experiment upon which the State was about to enter, and as its medical attendant a gentleman was selected whose experience as physician to the old Walnut Street prison, and whose high character, both morally and professionally, offered the best security that nothing would be left undone to secure to the inmates as good a degree of health as was compatible with their position and circumstances. For the first few years nothing transpired to excite doubts in the propriety or humanity of the plan of separate confinement. The

medical reports, though written with great caution and accuracy, bore testimony to the general good health of the prisoners, and to the safety of the course to which they were subjected.

As, however, the number of persons brought under the discipline of the institution increased, and the influence of long periods of imprisonment became more evident, facts accumulated which appeared to place a different aspect on the question.

The observations of our esteemed fellow, Dr. B. H. Coates, who, as a member of the Prison Discipline Society, was a frequent visitor at the institution, induced him to believe that there was a large mortality from scrofula and consumption amongst the prisoners of African descent; and on investigating the subject with his usual candor and accuracy, he proved conclusively that separate confinement was particularly injurious to the colored race. Dr. Coates' paper was published in 1843, although his first communication on the subject was made to the Prison Society in 1840. In addition to this, a large number of cases of acute dementia began to appear in the medical reports of Dr. Darrach during the years 1839, 1840, and 1841, occurring more frequently amongst the colored prisoners, and believed by Dr. D. to be mainly attributable to self-abuse.

Without proceeding farther with this history, we shall endeavor to lay before the College a brief summary of the sanitary condition of this institution, together with that of the county prison at Moyamensing, down to a recent period, and then proceed to a comparison between them and the English prisons.

The whole number of prisoners received at the Eastern State Penitentiary, to the close of the year 1848 (as contained in the annual report for that year), is 2421, of whom 1631 were white, and 790 colored. The number of deaths recorded to this time, embracing a period of 19 years, is 214, or nearly 90 in the 1000, or within a fraction of 9 per cent. of the whole number received. Calculating the mortality of each year from the average number of convicts for the year, and then giving the average annual mortality for the whole period, this per centage would be considerably reduced; but the former method appears to me to convey a more accurate idea of the relative proportion between the number subjected to confinement and the number of deaths, besides being that applied by Dr. Winslow to the English prisons, with which we shall presently compare them.

The class of prisoners received at this institution is not of the worst description, nearly two-thirds of them coming from the rural districts; thus, from 2176, received to the close of the year 1846, 948 were from Philadelphia County, and 1228 from the country: of 124 new prisoners received in 1847, 43 were from Philadelphia County, and the remainder from the country; and of 121 received in 1848, 40 were from Philadelphia, and the rest from the other counties.

The sentences of the convicts range from one to twenty-one years, their average duration being about three years.

The accustomed population of the prison for some years past has been about 300. The deaths in any one year vary from 1 to 26, and are generally from chronic disorders, scrofula and consumption being the most prominent. Acute diseases, and especially infectious and epidemic disorders of a low type which so frequently scourge crowded and filthy prisons, are unknown at Cherry Hill. The most fruitful source of the large mortality indicated by the above figures is from the deaths amongst the colored prisoners; from the 790 colored inmates received to the close of the year 1848, 141 deaths occurred, being nearly 18 per cent. of the whole number.

It would be easy to give the annual average mortality of this class, as derived from the average number in prison in each year. Thus, in looking through the reports, I find in two years, 1830 and 1833, there were no deaths amongst the colored, while in 1831, the average mortality of this class to the average number in prison was 10.03; in 1832, 13.52; in 1834, 6.68; in 1835, 4.61; in 1836, 6.74; in 1837, 6.49; in 1838, 11.80, &c., while, according to Dr. Emerson's tables, the annual average mortality of the colored population of Philadelphia of both sexes and all ages, between the years 1830 and 1840, was about 3½ per cent.

Of the 1631 white prisoners admitted during the same period, there were 73 deaths, or about 4½ per cent. of the whole number; the per centage in different years varying as in the case of the colored. Thus, in 1830, the per centage is 4.19; in 1831, 4.18; in 1832, 1.44; in 1833, 1.11; in 1834, .80; in 1835, 1.26; in 1836, .99; 1837, 3.00, &c. &c. The average mortality of the white population of the city and liberties, during the decennial period above referred to, was 2.37.

The mortality above indicated would be somewhat increased by taking into account the number of pardons granted on account of ill health within this period; but, inasmuch as we have no means of arriving at this, we shall exclude it from the calculation. It may be stated, however, that, to the close of the year 1848, 278 prisoners had partaken of executive clemency.

At the county prison at Moyamensing, built and conducted upon the same plan, we have the following general results: Taking, for the sake of convenience, a period of thirteen years, viz., from 1835 to the close of the year 1848, we find that 2818 prisoners were sentenced to separate confinement in the convict department of this establishment; of these 1526 were white, and 1392 colored. These prisoners are from the city population, and are of course in a less vigorous state of health on admission than those from the country; but their sentences are as a general rule short, in a large proportion of cases not exceeding a year, and a majority of them between three and nine months.

Of the 1526 whites, 37 died, or at the rate of about 25 in the 1000, or 2½ per cent. Of the 1392 colored, 118 died, being a fraction over 80 in the 1000, or 8½ per cent. It will be seen that the same disparity exists here in the mortality between the white and colored; though the average for both colors falls far below that of the State institution; a fact which forcibly illustrates the comparative influence of long and short sentences in separate prisons.

In both institutions, every attention is paid to the diet, clothing, and medical supervision of the prisoners; the construction of the buildings, and the general course of discipline are the same in each, except that in the county prison the cells are not provided with exercise yards, and the intercourse between the prisoners through the windows opening out upon the main yard, and by other means, is much more easy than in the State institution.

With this summary view of the condition of the prisons in our own vicinity, let us turn for a few moments to the state of things in England, as reported to us in the paper referred to at the opening of this communication.

It has been remarked that the British government has, within a few years past, adopted the plan of separate confinement, in her penal institutions; and the experience thus acquired has

frequently been quoted in this country as confirmatory of the safety and efficiency of this system.

It must be borne in mind, however, that the separate system in England is a far different thing from the Pennsylvania system. It is, in fact, divested of some features which are considered fundamental with us. Let me briefly explain the difference.

Separate confinement in England is but a part of a general scheme of management and disposal of convicts; and not, as with us, the only means of satisfying the requisitions of the law. It is, in fact, a probationary stage, intended for the moral training of the prisoner, prior to his entering into associated labor on the public works, or in the colonies. The maximum period to which separate confinement is carried there, is eighteen months, while the sentences rarely exceed a year, and in many instances are not over six months. Beyond these periods it is not considered safe by some of the best authorities. Thus, Major J. Jebb, Inspector-General of Prisons, remarks, in one of his recent reports to Parliament: "My own independent conclusion, founded on close observation of the system carried out at Portsmouth, Wakefield, and other prisons, is that separate confinement, with very few exceptional cases, and with ordinary precautions, may be safely and generally adopted for periods extending from six to twelve months or rather more. Beyond twelve months I think it requires greater care and watchfulness than would perhaps be insured under ordinary circumstances, and there are grounds for believing that it is neither necessary nor desirable to extend it." (See first Report on Portland Prison, &c., by Lieut. Col. Jebb, presented to both houses of Parliament by order of her majesty, 1850.)

Pentonville and Millbank are the two most extensive separate prisons in England; they are of modern construction, and are said to be admirably arranged and managed. The former went into operation in 1842, and cost the government £85,000 or £162 per cell; it is capable of accommodating 500. The latter has been built since, at a cost of half a million sterling, with accommodations for 1100 convicts. Besides these, there are five or six smaller institutions, in different parts of the kingdom, containing in all, according to the reports for 1850, 2686 per-

sons who were undergoing the probationary period of separate confinement.

Dr. Winslow estimates the known registered mortality of these prisons at 19 in the 1000, exclusive of pardons for ill health, which being included would bring it up to 23⅛ per 1000, or a fraction over two per cent.

The diseases which are the main outlets of life are, as with us, scrofula and consumption. At Pentonville, the mortality, since its opening in 1842, has been 13¼ per 1000; at Millbank, 18½ per 1000. At the Pentonville establishment; the prisoners are picked men, and none are admitted who have not been pronounced by the physician in the best mental and bodily health. Of the first 1000 thus admitted, 11 died of consumption, and 14 were pardoned for having contracted the disease, which would make the rate of mortality from this disease alone 2½ per cent. amongst men selected for their physical vigor. The highest ratio of mortality in any one of the English separate prisons is, according to Dr. Winslow, 41 deaths to the 1000; this is at Reading, which contained in 1850 only 40 convicts.

It will now be seen that the mortality of the separate plan prisons in England, although regarded as high, falls considerably below that of the Philadelphia establishments.

Thus we have had at Cherry Hill at the rate of 90 deaths to the 1000 prisoners, and at Moyamensing about 52 to 1000, including the deaths of colored prisoners; comparing the white mortality alone, the disproportion is much less. Thus, we have at Cherry Hill 45 to 1000, and at Moyamensing about 25 to the 1000, exclusive of the pardons, the latter being but little above the registered mortality of the English prisons, stating it at 23⅛, and the former exceeding but little the mortality of the prison at Reading, 41 in the 1000.

Did time permit, the causes of this disproportion in the deaths in the English prisons and our own might, I think, be satisfactorily explained; and in connection therewith some cogent arguments furnished in favor of a modification of the system now in operation in both countries; but I fear that the patience of the College is already wearied, and I must therefore ask their indulgence for a few moments while I present another branch of this inquiry, of still greater importance.

The tendency of separate confinement to induce insanity has

been constantly alleged as a most serious objection to its adoption, while the more ardent friends of the system have either totally denied this tendency, or have considered it a contingent circumstance, and not a necessary accompaniment of its proper administration.

Examining this question as it is presented to us in the medical reports, and collating the results, we shall find no difficulty in arriving at the truth.

Dr. Winslow states the cases of mental disorder in the Pentonville prison, between January 1, 1843, and June 30, 1850, at 42 out of 3050 prisoners, being 13.7 per 1000, or 5⅞ greater than the average in the community; at which rate, were it general, England would have, in 1851, near upon 50,000 male pauper lunatics within her borders!

In Millbank, 34 cases are reported out of 18,520 adults, and 9 cases in 2024 juveniles. And at the meeting of the society at which these statements were made, Dr. Webster stated that, within the last three years, 20 insane prisoners had been sent to the Bethlem Hospital from the Penitentiary at Millbank, and 12 from Pentonville, thus making 32 lunatic patients from these establishments.

In Portland prison, but 5 cases of insanity are reported in 1450 prisoners, or about 3½ per 1000, being one per 1000 above the average. This is an establishment recently opened in the sea-coast of Portland, for the reception of prisoners who have been undergoing separate confinement; and who are here subjected to a course of moral discipline and industrial training, in associated labor during the day, with separation during the night and at meal times, prior to their final deportation to a penal colony. During the progress of labor on the public works (which is always carried on under the immediate superintendence of the prison officers), the prisoners are allowed to converse to such an extent as not to interrupt the progress of their work. They are also stimulated to good conduct by becoming eligible for release from penal discipline, and embarkation for the colonies, at an earlier period than their sentences would indicate, and by the prospect of procuring on their arrival constant employment at good wages, with the ultimate privilege of being joined by their families in their new home.

The conclusion reached by Dr. Winslow, in view of these facts,

is unfavorable to the opinion that the separate or solitary system, even in the modified and restricted form adopted in England, is innocuous to the mind and body, although he hopes that some modification may yet be devised which will relieve it of the well-founded objections which now hold against it.

The statistics furnished by the prisons at Philadelphia bearing upon the question of insanity, are much more full and conclusive than those from abroad; and I ask the attention of the College to them as affording matter for serious reflection and energetic action on the part of those who regard the just and merciful administration of penal law as amongst the highest objects of civil government.

A full account of all the cases of insanity occurring at the Eastern State Penitentiary has not, up to the present time, been prepared; although there has been, in each year, a tabular statement of the number of cases occurring within the year, with the color, age, sex, health on admission, hereditary tendency, period of imprisonment at which the attack occurred, the form of the disease, and the result.

The following series of tables, taken from the annual reports of Dr. Given from 1845 to 1850, inclusive, will show the number of insane, with the attendant circumstances, during this period.

TABULAR VIEW OF CASES OF INSANITY FOR 1845.

No.	Color.	Sex.	Age.	Health on admission.	Time in prison.	Hereditary tendency.	Form of disease.	Event.	Length of sentence.
1723	W.	M.	39	Imperfect.	14 months.	No information.	Monomania.	Unimproved.	2 years.
1850	B.	M.	26	Good.	10 months.	None.	Partial mania.	Unimproved.	3 years.
1859	W.	M.	38	Good.	11 months.	None.	Monomania.	Cured.	3 years.
1782	B.	M.	20	Imperfect.	2 years 5 mos.	Mother insane.	Monomania.	Uncertain.	3 years.
1764	W.	M.	28	Epileptic.	1 year 8 mos.	None.	Melancholia.	Much improved.	3 years.
1738	W.	M.	30	Good.	1 year 9 mos.	None.	Monomania.	Unimproved.	3 years.
1896	W.	M.	26	Good.	1 year.	Mother insane.	Monomania.	Cured.	1 year 6 mos.
1811	W.	M.	35	Headache.	10 months.	Uncle an insane suicide.	Monomania.	Improved.	2 years 6 mos.

TABULAR VIEW OF CASES OF INSANITY FOR 1846.

No.	Color.	Age.	Sex.	Crime.	Health on admission.	Time in prison.	Hereditary tendency.	Form of disease.	Event.	Length of sentence.
1780	M.	27	M.	Larceny.	Imperfect.	2 years 2 mos.	No information.	Monomania.	Unimproved.	3 years.
1943	B.	22	M.	Larceny.	Good.	1 year.	No information.	Mania.	Unimproved.	6 years.
1521	B.	32	M.	Burglary.	Imperfect.	4 years.	No information.	Partial mania.	Unimproved.	5 years.
1882	W.	30	M.	Horse stealing.	Good.	1 year 9 mos.	No information.	Monomania.	Unimproved.	2 years 6 mos.
1905	B.	20	F.	Larceny.	Good.	1 year 6 mos.	No information.	Monomania.	Improved.	2 years.
2061	W.	22	M.	Larceny.	Imperfect.	6 months.	Grandmother, aunt, and brother insane *	Monomania.	Much improved.	2 years 6 mos.
2040	B.	17	M.	Riot and assault and battery.	Good.	8 months.	A brother and an aunt insane.	Mania.	Apparently well.	1 year 6 mos.
1901	W.	27	M.	Burglary.	Good.	1 year 8 mos.	No information.	Monomania.	Unimproved.	9 years.
2071	M.	22	M.	Larceny.	Imperfect.	1 year 6 mos.	Three aunts insane.	Paroxysmal mania.	Unimproved	2 years.

* The statements of hereditary predisposition are not given on the authority of the prisoners' own assertion alone, but with the concurring testimony of their relations and friends.

TABULAR VIEW OF CASES OF INSANITY FOR 1847.

No.	Color.	Age.	Sex.	Crime.	Bodily health on admission.	Time in prison.	Hereditary tendency.	Event.	Length of sentence.
1865	W.	25	M.	Burglary.	Imperfect.	2 years 6 mos.	No record.	Unimproved.	4 years.
1352	W.	62	F.	Murder in 2d degree.	Imperfect.	6 years 4 mos.	No record.	Slightly improved.	10 years.
2054	W.	35	M.	Larceny.	Good.	1 year 2 mos.	None.	Died.	2 years.
2136	W.	23	M.	Horse stealing.	Imperfect.	8 months.	Mother insane.	Much improved.	2 years.
2134	W.	36	M.	Assault and battery with intent to kill.	Imperfect.	10 months.	None.	Slightly improved.	5 years.
2005	W.	37	M.	Murder in 2d degree.	Good.	2 years.	None.	Unimproved.	7 years.
1533	B.	27	M.	Burglary.	Good.	5 years 4 mos.	No record.	Unimproved.	10 years.
2064	W.	25	M.	Larceny.	Imperfect.	1 year 8 mos.	Mother and brother insane.	Sentence expired.	2 years.
2022	W.	25	M.	Robbery.	Good.	1 year 10 mos.	None.	Unimproved.	4 years.
2078	B.	22	M.	Burglary.	Good.	1 year 8 mos.	None.	Unimproved.	3 years.

TABULAR VIEW OF CASES OF INSANITY FOR 1848.

No.	Color.	Sex.	Age.	Health on admission.	Time in prison.	Hereditary tendency.	Form of disease.	Event.	Length of sentence.
1989	W.	M.	29	Imperfect.	2 years 4 mos.	None.	Dementia.	Sentence expired; improved.	5 years.
2155	W.	M.	22	Imperfect.	1 year 5 mos.	None.	Dementia.	Unimproved.	1 year 3 mos.
2021	W.	M.	23	Imperfect.	2 years 2 mos.	None.	Monomania.	Unimproved.	2 years.
1868	B.	M.	23	Good.	2 years 9 mos.	None.	Dementia.	Unimproved.	6 years.
1842	W.	M.	28	Good.	3 years.	Uncle insane.	Dementia.	Unimproved.	7 years 6 mos.
2200	B.	M.	24	Good.	1 year 2 mos.	None.	Monomania.	Unimproved.	2 years.
1978	W.	M.	38	Good.	2 years 9 mos.	None.	Monomania.	Unimproved.	8 years.
2185	B.	M.	29	Good.	1 year 3 mos.	Brother insane.	Monomania.	Unimproved.	3 years.
2215	B.	M.	25	Imperfect.	8 months.	None.	Monomania.	Unimproved.	2 years.
2344	B.	M.	17	Good.	5 months.	Brother insane.	Dementia.	Improved.	1 year.

TABULAR VIEW OF CASES OF INSANITY FOR 1849.

No.	Color.	Age.	Sex.	Crime.	HEALTH ON ADMISSION.		Time in prison.	Hereditary tendency.	Event.	Length of sentence.
					Bodily.	Mental.				
2382	W.	25	M.	Larceny.	Delicate.	Weak.	6 months.	None.	Cured.	2 years.
2274	W.	20	M.	Larceny.	Good.	Medium.	1 year 4 mos.	None.	Unimproved.	3 years.
1887	W.	30	M.	Burglary.	Imperfect.	Good.	4 years 4 mos	None.	Unimproved.	5 years.
2317	B.	21	M.	Burglary and larceny.	Good.	Weak.	1 year.	None.	Improved.	2 years.
2331	W.	43	F.	Larceny.	Delicate.	Weak.	1 year.	Uncle insane.	Pardoned.	3 years.
2398	B.	15	M.	Larceny.	Asthmatic.	Good.	6 months.	Father insane.	Unimproved.	3 years.
2280	M.	25	M.	Larceny.	Good.	Good.	1 year 7 mos.	None.	Unimproved.	3 years.
2251	W.	24	M.	Burglary and larceny.	Good.	Good.	2 years.	None.	Unimproved.	3 years.
2451	W.	22	M.	Larceny.	Good.	Good.	4 months.	None.	Improved.	6 months.
2378	W.	38	M.	Larceny.	Good.	Good.	1 year 2 mos.	None.	Pardoned.	1 year 6 mos.
2273	B.	30	M.	Manslaughter.	Epileptic.	Weak.	1 year.	None.	Unimproved.	2 years.

TABULAR VIEW OF CASES OF INSANITY FOR 1850.

No.	Color.	Age.	Sex.	Crime.	HEALTH ON ADMISSION.		Time in prison.	Hereditary tendency.	Event.	Length of sentence.
					Bodily.	Mental.				
1989	W.	35	M.	Burglary.	Imperfect.	Good.	5 years.	Father and brother insane.	Unimproved.	5 years.
2397	B.	18	M.	Burglary.	Delicate.	Good.	2 years.	None.	Unimproved.	3 years.
2243	W.	32	M.	Passing counterfeit money.	Good.	Good.	3 years 6 mos.	None.	Apparently cured.	5 years.
2369	B.	31	M.	Burglary.	Scrofulous.	Good.	2 years 4 mos.	None.	Improved.	3 years.
2441	W.	20	M.	Burglary.	Good.	Good.	1 year 10 mos.	None.	Unimproved.	3 years.
2461	B.	25	M.	Highway robbery.	Good.	Good.	1 year 8 mos.	None.	Apparently cured.	4 years.
2537	W.	31	M.	Assault, battery, and attempt to commit rape.	Good.	Rather weak.	4 months.	Epilepsy.	Pardoned.	1 year.

It will be seen, from the above tables, that 55 cases of insanity originated in the Penitentiary during a period of six years, with an average population of about 800 prisoners. These occurred at various periods of confinement, but it is worthy of remark that a large proportion of them *were developed in prisoners under long sentences.* Thus 36 of the 55 cases were in prisoners sentenced for more than two years, 12 for two years, and 6 for terms between one and two years, and one for six months.

This fact is exceedingly interesting when viewed in connection with the observations made in the English prisons, and affords conclusive evidence of the tendency of long sentences to produce insanity in separate plan prisons.

In addition to the tables given above, it may be stated that there are at the present time 43 insane prisoners within the walls at Cherry Hill; out of a population of 300, 30 of these cases have been developed in the institution: the other 13 were more or less insane on admission, although 10 of them were convicted of crime, and sent there as convicts. Of these 43, 28 are white, and 15 colored; 41 males and 2 females.

All of these cases are recorded as insane, and are so regarded by the medical officer, and by the overseers in charge of them. Dr. Given, the late physician of the penitentiary, is certainly competent authority on this point. A residence of two years as medical assistant to Dr. Kirkbride, and of seven years at the Penitentiary, besides a high reputation for the conscientiousness and accuracy of his medical opinions, give to his judgment a peculiar value. The cavils of non-professional partisans, however well meaning and sincere may be their desire to advance their peculiar views, can weigh nothing against the testimony of so careful and enlightened a medical observer.

Many of the cases of insanity occur in convicts of slender capacity, whose education and mental resources are limited, and who speedily succumb when deprived of society. They are commonly ushered in by frightful hallucinations, such as imaginary sounds outside of the cell; conversation between enemies conspiring to do them injury, with constant apprehension of murder or destruction: then comes on loss of sleep, with its attendant nervous excitement; and if not arrested in this stage by appropriate treatment, more confirmed mania, or dementia follows.

Suspected poison in the food, and consequent refusal to eat,

is another common form of hallucination. One prisoner, who is regularly at work, has, for a long time, supposed himself the intended victim of a conspiracy out of doors, and although he is locked in his cell with double doors, front and back, he regularly barricades his doors at night, to keep out his tormentors.

It may be stated farther, on the authority of Dr. Given, confirmed by the testimony of the warden, and of the overseers appointed by him, that the present number of the insane is not excessive; but that for a number of years past, it has been about in the proportion here stated. A majority of the officers place the ratio of insane at 10 per cent., while the lowest estimate is 7 per cent. Admitting it to be 8 per cent., we should have 80 cases of insanity for every 1000 prisoners, or over 200 cases for the 2549 prisoners admitted to the close of the year 1849; exclusive of a large class sent to the institution with their minds more or less diseased.

This estimate does not rest upon vague assertion, or upon the clamor of the opponents of the system; it comes from men deeply interested in the welfare of the institution over which they watch, many of whom have been connected with it for a long series of years, and are thoroughly conversant with its practical working.

In the county prison, the number of insane reported falls far below that of the State institution, and approaches nearer to the British prisons. A statistical table of all the cases occurring between the years 1835 and 1849 gives us 23 cases from 2815 prisoners, and of these, 14 are said to have been more or less insane on admission, leaving but 9 cases originating in this prison; a number considerably below Pentonville, above Millbank, and nearly equal to Portland. This striking difference between the State and county prison may, I think, be explained on the same grounds which have heretofore been assumed when speaking of their relative mortality, the difference in the length of sentences being the most important element in the consideration.

From the above comparison of the mortality and insanity of our separate plan prisons with those in England, it will be seen that the State prison at Cherry Hill, where the experiment of separation was first commenced, and where it has been vigorously carried out for more than 20 years, has been the most severely scourged by those disorders which medical experience

has proved to follow rigid confinement in close and darkened rooms, without the requisite amount of exercise in the open air, and sun light. While it is equally evident that the abrogation of the social principle, continued for lengthened periods as practiced here, inflicts upon a certain class of minds serious and oftentimes irreparable mischief. The extent of these evils can only be realized by looking through the entire history of this institution, and computing the mortality and insanity from the whole number of persons subjected to its discipline.

It is also observed that in the separate plan prisons of England, where the sentences rarely exceed a year, and in which all the modern improvements of construction have been introduced at an enormous expense, the mortality and insanity, although comparatively trifling, have still been sufficiently high to attract the notice of distinguished medical men, and to induce them to doubt the propriety and humanity of the plan.

This is not the time or place to enter into an examination of the healthfulness of other prisons, as compared with those to which our attention has been directed, or to discuss the relative merits of the plans of imprisonment now in vogue. My object is not to advocate any particular system, but rather to show that an exclusive devotion to one idea on this subject may lead to serious consequences, both as it affects individuals and the State. When we consider the great variety in the physical and mental constitution of man, the many diverse circumstances by which his actions are influenced, and the various grades of moral depravity which mark his departure from a virtuous life, it would seem reasonable that, in graduating punishment, some regard should be had to these differences; and that one invariable method should not be applied to all. While, therefore, we would not abandon the separate principle as applied for *limited periods* to the generality of convicts, we should be equally averse to applying it to those whose physical and mental constitution were proved, by observation, to be peculiarly obnoxious to its influence.

To continue such a course would be visiting calamities upon these erring and rebellious subjects of the State which the law never intended, and from which humanity revolts. What more cruel penalty can be inflicted on a fellow-being than the dethronement of his reason!—to be doomed to a life of sorrow and pri-

vation—the creature of sudden impulse, or the passive and imbecile instrument of another's will! What hope of steady and consistent conduct can light the path of those whose minds have been unhinged by the very means taken to enlighten and reform them?

These are questions which naturally arise in view of the facts here presented; they are not the offspring of a sickly sentimentality, or of a morbid sympathy for criminals; they affect alike the honor and reputation of the commonwealth, and the best interests of those who have forfeited their liberty, by violating its laws.

In the remarks here made, I must distinctly disclaim any feeling of opposition to the institutions more especially brought under review. Their management and discipline are, I believe, in accordance with the laws, and those placed in charge of them appear to be generally imbued with a spirit of humanity in carrying out the trust committed to them. That this is the case at Cherry Hill, frequent personal observation for some years past as a visitor and member of the Prison Society, has fully convinced me. I doubt, indeed, if there is a prison in the country supplied with a more intelligent and humane body of officers than this; and none certainly where a greater degree of order, decorum, and good feeling prevails.

There is also, on the part of the chief officers of the institution, no desire to suppress inquiry into the effects of their discipline upon life and health, or to retard such improvements and modifications in the mode of punishment in operation there as enlightened experience may suggest.

I hope the College will excuse me for taking up so much of their time in the examination of a subject which may be regarded by some as not strictly within our province to discuss. I know that there is a feeling abroad opposed to all efforts tending to the farther amelioration of the criminal code, and it is even contended that, by making prisons too comfortable, and their discipline too mild, a direct bounty will be conferred upon crime, and thus one grand check to the evil passions and designs of bad men will be removed. But I trust that, as physicians, desirous of the establishment of truth upon a question of great public moment, no such considerations will deter us from investigations into the effects of the various methods of punish-

ment upon the minds and bodies of the inmates of prisons, and, if we find suffering and disease beyond the limits which the law contemplates or which humanity sanctions, that our voices at least will be raised for their correction.

INSTRUMENT FOR RUPTURED URETHRA IN FEMALES.

Dr. Ch. D. Meigs desired to present for the inspection of the Fellows a small instrument, from the employment of which, in cases of a particular kind, he had derived satisfaction from its good effects as to the patient.

For example, in a case of labor which occurred three years ago, and in which the shoulder presented, the child was extracted by embryotomy.

After her confinement, the lady was affected with incontinence of urine, which, at first, was supposed to depend upon paralysis of the sphincter vesicæ, arising from the long-continued pressure and contusion of the parts during her agony. She was encouraged to hope that the powers of the bladder might gradually return, and with them the faculty of conveniently retaining the urine. After the lapse of some months she was informed by a surgeon that a rupture or fissure had taken place, which had left the urethra open to a considerable extent at a spot very nigh to the neck of the bladder, and that the urine was continually escaping through the said rent. The gentleman hoped to effect a cure by causing a thick cushion of granulations to rise and fill up the gap; and he did produce a very large bunch or *bourrelet* of them, which sometimes seemed to choke up the opening, so as to enable her to retain a small quantity of urine while in a recumbent posture, though she could never walk about without perceiving the continual dribble of the offensive and excoriating fluid. The cauterizations failed. Meanwhile, she became again pregnant, and passed through her confinement without any accident or aggravation of the old distress.

Sometime after recovering from the accouchement, she consulted Dr. M. upon the case. After an exploration of the fistula, Dr. Pancoast was invited to see her with Dr. M.

Owing probably to the irritation produced by the constant flow of urine over the labia, perineum, and thighs, the privy parts had become so painful and so contracted that it was not judged

possible to bring the fistula within reach and inspection, sufficiently to admit of the operation.

Under these circumstances, Dr. M. devised the little spindle-shaped canula, now exhibited, which is long enough to reach from the *meatus externus* to the orifice of the bladder. The outer extremity of the canula is filled with an oval disk, just large enough to rest upon the vestibulum, while the inner end of the tube expands into a small funnel or trumpet-shaped opening, which, barely looking into the cavity of the bladder, serves to collect all the urine, and transmit it through the canula to be received upon sponges applied on the exterior of the vulva. The canula, at the distance of about a quarter of an inch behind the disk or shield, swells out like a spindle, in order that the less muscular part of the urethra may be considerably distended by it, and thus hold or retain it *in sitû*, while the more contractile part of the urethra, near the meatus, may grasp the smaller or neck-like part of the tube, just behind the disk, and thus aid in preventing it from escaping. To the same end is directed the idea of the trumpet-shaped orifice, which, being once within the bladder, cannot readily be forced out except under circumstances of a strong tenesmus. From the funnel-like expansion to the bulge, the canula is small—so small as not much to distend the urethra at its broken part.

Dr. M. proposes this very simple contrivance as a means for suspending the flow of urine through a small urethro-vaginal fistula, and supposes that, if a patient so afflicted could wear such an instrument, either continually or with occasional intervals, for many consecutive months, it might reasonably be expected that the opening would gradually lessen in size, and at last close spontaneously, or become curable by contact of the crayon of nitrate of silver, or the touch of a silver probe heated to redness and used as an actual cautery.

The patient here in question did use this instrument during several months.

Upon her return to the city, the parts were found to be more favorably disposed as to a cure, and which was effected by an operation performed by Dr. M.'s colleague, Dr. Pancoast. Dr. M. expressed his wish that this suggestion might become useful in such or in analogous cases.

INSTRUMENT IN CASES OF RETROVERTED UTERUS.

Dr. M. asked leave to present to the Fellows another instrument. Very long and considerable experience in the treatment of diseases of women had convinced him, he remarked, that the major part of them originated in displacements of the womb, especially in retroversion of that organ. Nothing can now make him believe that he is wrong in supposing that seventy-five per cent. of the sexual diseases of non-gravid women, for which medical men are appealed to to treat, consist in, or are an aggravation of, retroversio uteri. Assuredly he has found retroversion in three out of every four persons who have thus appealed to him for many years, and that, whether the cases have been regarded as leucorrhœa, dysmenorrhœa, menorrhagia, prolapsus, tumor, &c. &c.

Like other medical people, he has found these cases very troublesome, and difficult to cure by the various apparatuses proposed since the days of Hippocrates. He has, in some instances, found it impossible by means of the instruments proposed to maintain the uterus *in sitû naturale*, that is, with the os tincæ within the natural distance from the fourth segment of the sacrum.

The cause of this difficulty he has conceived to be that, in a woman who has long labored under retroversion, or in whom the os uteri has rested for months, or for years, close to the symphysis, the anterior column of the vagina has become so condensed by the operation of the law of *contractilité par defaut d'extension*, as Bichat calls it, that, when the surgeon has reposited the womb, and conducted the cervix backwards to its place near the lower end of the sacrum, and placed a globe, an oviform, or other pessary there to retain it in its place, the condensed anterior columna vagina slowly but surely contracts like a piece of caoutchouc, and pulls the os again forwards over and above the pessary, whereupon the retroversion instantly takes place, the round ligaments, &c., being too relaxed to prevent the fall. In this condition, the patient begins to suffer worse pains than before, having to contend not only with her retroversion, but the evil effects of the instrument besides.

As the antero-posterior diameter of the pelvis is four and a

half inches, it is clear that any apparatus designed to hold the cervix in a position near the apex of the sacrum, must be a large instrument. But when large, the adjustment of them is painful—or even, in some instances, impracticable. It has been long a desideratum to obtain an elastic ring that can be compressed into a very narrow oval, for the adjustment, and may afterwards be allowed to expand again into a circle.

No person has yet invented such an elastic pessary as may safely be adjusted and left *in sitû* for an indefinite period.

The pessary, made of a bit of watch-spring bent into a ring, and rivetted, then *served* with cord or bobbin, and afterwards imbibed full of boiling virgin wax, is a perfect instrument for this object, save that it requires too frequent renewal, which is disagreeable and even offensive to delicacy, since in all such operations it is desirable to have done with them at once, if it be possible.

Some time since, Mr. Joseph Warner, at Dr. M.'s suggestion, took a tube nine inches long—the size of a swan's quill. It was bent into a ring, the ends being united by silver solder. It was fire gilt, and when completed weighed seventy-two grains.

If such a ring be made with absolutely pure silver—having no alloy—it is almost as pliable as a block-tin bougie. The ring may be compressed betwixt the hands into a very narrow oval, so as to admit of a painless adjustment, and then moulded or pulled into its circular form again, after it has taken its place in the vagina.

Suppose such a silver-gilt ring, three inches in diameter, to rest one arc behind the symphysis pubis, and with the opposite arc to lie in the posterior *cul-de-sac* of the vagina, just behind the cervix uteri—is it not manifest that it will effectually tie the os to a place near enough to the apex of the sacrum—keep the fundus up and in the axis of the plane of the superior strait—and thus not only give time for the ligamenta rotunda to recover their density, but overcome this long, habitual condensation of the anterior columna vaginæ?

Dr. M. believed that no case of retroversio uteri, unattended with enormous hypertrophy or heterologue development of the womb, can fail to be cured by a discreet use of this instrument; nor does he believe that about seventy-five per cent. of sexual

maladies will yield to any treatment unless aided by some such internal truss.

The replacement and retention of the dislocated womb in its natural position were, Dr. Meigs remarked, of vast importance, as well to relieve the female in whom the displacement has occurred from much distress and suffering, as to ensure the safety of the organ itself. The uterus is subject, physiologically, to frequent states of congestion and hypertrophy. During pregnancy, we find it to become hypertrophied to a very great extent. But this being strictly a physiological condition, it ceases as soon as the necessity for its continuance is removed. Thus, after the maturation of the ovum and the expulsion of the fœtus, the uterus begins to lose its increased bulk, and in forty days returns in general to its normal, non-hypertrophied condition.

But this very physiological tendency to augmentation of vascularity and bulk renders it liable to similar pathological conditions from the various irritations and injuries to which it is subjected. When retroverted, the womb is in a state of irritation, and liable to become hypertrophied, a condition from which it cannot be relieved, so long as the retroversion continues, by any course of treatment short of replacement and retention in its natural position; but let this once be effected, and the womb hastens to disgorge itself, the abnormal amount of matter which has been deposited in its tissue disappears, and it speedily returns to its natural size and condition.

Stated meeting—October 7, 1851.

Dr. WOOD, President, in the chair.

Present thirty-three members.

A Committee consisting of Drs. Condie, Hays, and Parrish, were appointed to have printed the Ordinances and By-Laws of the College, embracing the various amendments adopted since the last edition.

The following additions to the Library were received:—

Recueil de Lettres, et de Mémoires, addressés à l'Académie des Sciences, pendant les années 1842 et 1843. Par Leroy D'Etiolles.

Mémoire sur les Maladies des Appareils Sécréteurs des Organes Génitaux Externes de la Femme. Par P. C. Huguier.

Mémoire sur l'Esthiomène, ou Dartre Rongeante de la Region Vulvo-Anale. Par P. C. Huguier.

Presented by the authors, through Dr. David King of Newport, Rhode Island.

DISEASE OF THE EYE.

Dr. HAYS remarked that, if there was nothing of more importance to occupy the attention of the College, he would take the opportunity of relating the outlines of a somewhat curious case that had been interesting to him, and, he thought, might be so to the Fellows present.

He had been sent for, in April last, to see a lady from the State of New Jersey, about thirty-five years of age, who was laboring under a very considerable protrusion of the right eyeball, which was also rolled inwards towards the internal canthus; the upper eyelid was also greatly enlarged by a number of encysted tumors. The deformity resulting from this condition of the eye, as may readily be supposed, was very considerable—the sight of the eye was entirely gone.

Dr. Hays was unable to obtain any very satisfactory history of the case. The patient was an orphan, and from her brother,

who was but a few years older than herself, all that could be learned was, that from his earliest recollections of his sister her right eye was somewhat protuberant. He thinks that he has heard her parents say, that up to her fourth year she had had no affection of her eye, but soon after this period the swelling had commenced, and it had gradually increased, until it had attained its present magnitude. The physicians in her neighborhood had been consulted in her case, and had tried a variety of remedies for her relief, but without success. She had, finally, been brought to Philadelphia for the purpose of consulting Dr. Hays.

The lady was of a lymphatic temperament, but Dr. H. could not discover anything in the case to lead him to suspect that the protrusion of the eye was caused by the formation of a malignant tumor behind it; he suspected that it was caused by an effusion within the capsule of Tenon. Still, he was not sufficiently positive as to the correctness of this diagnosis to warrant him in the introduction of a bistoury with the view of causing the discharge of the effused fluid. He concluded, therefore, to first direct his attention to the removal of the cysts within the upper eyelid, in the hope that, in the course of his attendance, the correctness of his diagnosis would be confirmed or disproved.

One of the cysts was opened with the knife, and then solid sulphate of copper was applied to its inner surface. The others were treated in succession in the same way, and the tumefaction of the lid, in consequence, was measurably reduced. At this state of the case, Dr. Hays left for Charleston, to attend the session of the American Medical Association. Upon his return he was sent for, and then learned that, on the day he left, the patient had accidentally tripped over, and, in falling, had struck with violence the right eye against the edge of a chair. The pain was intense, and the consequent swelling, from the contusion and ecchymosis, very considerable; upon the disappearance of this, it was found that the eye had receded. Dr. H. thought that very little doubt could exist as to the mode in which the violence inflicted upon the eye, in this case, had caused the removal of the protrusion previously existing. It was evidently by the rupture of the capsule of Tenon and the consequent escape of the fluid effused within it. Had the protrusion been caused by a malignant tumor formed at the bottom of the orbit, the blow upon the eye, instead of being followed by a removal of the pre-existing

deformity, would, on the contrary, have been more likely to be followed by an augmentation of the mischief, if not the rapid destruction, of the eye.

The protrusion of the eye has now nearly disappeared; the strabismus, however, still continues, and vision remains extinct.

The following "*Case of Abscess communicating with the Spinal Cavity*," was communicated by WILLIAM PEPPER, M. D., one of the Physicians to the Pennsylvania Hospital.

A young French sailor, aged 20 years, entered the Pennsylvania Hospital, June 7th, supposed to be suffering with a syphilitic affection. From his statement, it appears that, when eight days out at sea, he was attacked with gonorrhœa, which was soon cured by drinking freely of "*l'eau goudron*" or tar water. This was followed by slight pain in the back, which, in the course of several days, was somewhat increased by a fall from his seat during the rolling of the vessel; he continued, however, to be about as usual until the end of a week from this time, when he first perceived some difficulty in walking, and in voiding his urine; by the end of another week, the lower half of his body was completely paralyzed, and he was brought to the hospital. He now had involuntary discharges, retention of urine, and total loss of sensation and motion of the lower extremities. Sensation indeed was quite extinct as high up as the middle of the thorax; there was also some pain and stiffness about the right shoulder, and both the upper extremities were agitated by a slight spasmodic movement; the pulse was frequent and feeble, skin cool, and tongue furred. The following day he had somewhat reacted, and could move the right arm without the least difficulty or pain; the tremor had also ceased, and he appeared quite comfortable; but there was no improvement in his control over the sphincters or lower extremities. No important change occurred in his condition up to the 11th, or the fourth day after his admission, when he gradually became more feeble, and expired, his intelligence having remained unimpaired to the last.

Anything like depletion, either general or local, was entirely precluded by his prostrate condition, whilst the threatening of bed sores prevented the application of a blister along the spine; the only treatment to which he was subjected was calomel and opium, with broth and wine whey.

The examination post-mortem was made the following day by Dr. Hunt, in the presence of Drs. Hollingsworth, Hewson, and Pepper.

On removing the processes of the upper dorsal vertebræ, a teaspoonful or more of pus was observed in the vertebral canal exterior to the spinal membranes; upon further examination, it was ascertained that the pus had entered the canal through the intervertebral foramina, particularly those between the third and fourth dorsal vertebræ, and that it communicated with a large abscess occupying the anterior and lateral parts of these vertebræ. The dorsal portion of the spinal marrow was much softened, having the consistency of paste; the pia mater was minutely injected, but no necrosis or other disease of the ribs or vertebræ could be detected. The pleura investing the roots of the lungs was coated with a thick layer of recent lymph, which evidently formed the anterior wall of the abscess, and thus prevented the pus from perforating the lungs, or other important parts contained in the posterior mediastinum. The abscess appeared to be formed in the loose cellular tissue exterior to the pleura costalis, and the lungs themselves were perfectly healthy. The bladder was much contracted, and contained a small quantity of offensive urine, such as had been drawn off during life; its mucous membrane, though somewhat ecchymosed and discolored, was neither thickened, softened, nor otherwise diseased.

Not having found any case on record similar to the above, Dr. P. thought it might prove interesting to the College as a pathological curiosity.

Dr. Pepper suggested whether the abscess, in this case, was not the result of a rheumatic affection; it could scarcely, he conceived, be the result of the slight fall which the patient had experienced. The abscess had evidently been formed exterior to the spinal canal, into which latter the pus from it had oozed through the neighboring intervertebral foraminæ.

Dr. EVANS read a Biographical Notice of the late Dr. JOSEPH HARTSHORNE.*

Proposition (26) for Fellowship was presented.

* This notice will be printed in connection with the next number of the Summary.

BIOGRAPHICAL NOTICE

OF

JOSEPH HARTSHORNE, M. D.

BY CHARLES EVANS, M. D.

Read at the Meeting of the College, held October 7th, 1861.

Biography is one of the most interesting departments of literature. Narratives of the course and fortunes of particular individuals, although they may not have been distinguished by extraordinary achievements, or by any particular vicissitudes, if prepared in a truthful and discriminating spirit, generally arrest and fix the attention, and can hardly fail to interest. This is true in reference to biography generally; but it is felt with peculiar force by the members of the medical profession, in reference to the history of their fellow-laborers.

Physicians constitute a class so distinct in itself, while its individual members, though, perhaps, differing widely in character and attainments, yet approximate so nearly at their first entrance into the profession, and in many of the subsequent steps by which they win their way into practice, that they can readily adopt as their own, the toil, the hopes, and the success of him whose life may be depicted. A faithful and judicious delineation of the life of any one who may have attained to eminence in medical knowledge and practice, could not, therefore, fail to be acceptable, and might be useful, to the numbers who find themselves in a situation closely resembling his own, and to whom his efforts, his expedients, and even his miscarriages, would be of immediate and apparent application. But in the notices of its deceased members, called for by the College of Physicians, it can hardly be expected, brief as they must almost necessarily be, that much detail

can be gone into. With us, few who are engaged in the active duties of our profession, even where they may have attained to distinction, note down the causes, or the successive steps by which they have succeeded; or leave behind them a record of the difficulties they have met and overcome, and the mental labor they have performed in the prosecution of their responsible duties, and in their efforts to keep pace with or to accelerate the onward march of medical science. Hence our notices must almost universally be made up from the few incidents with which the author may have become acquainted by personal intercourse with him of whom he writes, or from the disjointed historical recollections of the deceased, treasured up in the memory of his family and of his friends. The truth of this has been particularly felt on the present occasion.

Our late colleague, Joseph Hartshorne, was the son of William and Susannah Hartshorne, of Alexandria, Virginia. His paternal ancestors resided in Lancastershire, England, being an old and highly respectable family, and members of the religious society of Friends. Owing to the persecution to which the members of that society were in those days subjected, this branch of the Hartshornes were induced, with others, to emigrate to America; and, on their arrival, they located themselves on the banks of the Raritan and of the Shrewsbury rivers, in West Jersey, being among the earliest settlers of that section of our country, and some of their descendants have continued to reside in the neighborhood of the old homestead down to the present time. One of the family who first emigrated was associated with William Penn and others as Proprietors of the Province.

From the banks of the Raritan, William Hartshorne, who took a strong interest in the success of the revolutionary struggle, removed to Philadelphia about the year 1777, where he married Susannah Saunders, daughter of Joseph Saunders; and shortly after he again moved on to a farm in Fairfax County, Virginia, in the immediate neighborhood of Mount Vernon, and at the same time entered into business as a merchant in Alexandria, District of Columbia. It was at the latter place that his son Joseph was born, on the 26th day of the 12th month, 1779.

Of the father of Dr. Hartshorne, who was a gentleman of the

old school, it may be truly said, that he was highly esteemed as a man of intelligence, urbanity, and the strictest integrity. Being a near neighbor of General Washington, he was on terms of familiar intercourse with him; and, though widely differing in sentiment on some points, it did not prevent a mutual friendship from subsisting between them. Among his extensive acquaintance, he was held in great respect for his many virtues, and so conscientiously did he adhere to the truth, that a member of the Assembly in that State testified, in speaking of him, "William Hartshorne's word is as good as any man's bond in all Virginia."

When about five years of age, the subject of our notice was attacked with smallpox; and having, in the course of treatment for that disease, been subjected to a large dose of calomel; while its effects were upon him, he was exposed to the sudden action of cold, by the servant having charge of him placing him on a stone step. A violent inflammatory affection of the lower limbs was brought on, which permanently altered their shape, interfered with their full and proper development, and rendered him lame throughout life. Previous to this sickness, he had enjoyed almost uninterrupted health, and was a remarkably active and vigorous child. As he grew up, he evinced a disposition naturally sensitive, affectionate, and confiding, with a keen sense of the ridiculous; but it was also impulsive, self-relying, and resolute; and these latter qualities, perhaps unduly developed by the circumstances under which his physical infirmity habitually placed him, in maturer years, amid the cares and vicissitudes of an arduous professional career, imparted an apparent austerity of manners, and a bluntness in his mode of speaking, that gained for him, with those but superficially acquainted with him, the reputation of moroseness, and of being devoid of feeling; traits which those who enjoyed the familiar intercourse of personal friends well knew to be entirely foreign to his real character.

Being entered as a pupil in the Alexandria Academy, he devoted himself with great ardor and industry to the different branches of study, evincing, at an early age, an unusual taste for intellectual pursuits. Being prevented by his lameness from participating in the more athletic sports of boyhood, his naturally sensitive and impulsive disposition led him to shrink from the

companionship of those of his own age, more favored than himself, and induced him to seek for sources of enjoyment in intellectual recreation within the reach of his individual attainment; or to derive pleasure and instruction combined, from the company and conversation of those far more advanced in years than himself. From these circumstances, and under the instruction and guidance of the accomplished Principals of the academy, he acquired a sound and competent scholastic education, and imbibed a taste for general literature; which, in after years, amid the toils of his profession, he delighted, when opportunity presented, to indulge. The thoroughness of his academical training was shown by the elegance and accuracy with which he both spoke and wrote his mother tongue, and the familiar knowledge of the Latin and French languages, which he retained throughout his life.

Upon leaving the academy, he entered the counting-house of his father, and for two or three years divided his time between the warehouse in Alexandria and the extensive flour-mills in Fairfax County, a few miles out of the town. It was while superintending the operations at the mills, that, for the purpose of extending his information and profitably occupying his spare time, he commenced perusing medical works; with no intention, however, of ever becoming a physician, the duties of a doctor being by no means in accordance with his original taste. But after a few months of this initiatory dabbling, influenced probably in some measure by the conviction that his lameness would prevent him from succeeding in business which at that time would have been more congenial with his inclination, he decided to devote himself to the medical profession; and, accordingly, was entered by his father as a student with Dr. Kraick, the well-known surgeon in the American army during the campaigns of the Revolution, and the friend and family physician of General Washington. He did not, however, long remain the pupil of Dr. Kraick, for a vacancy having occurred in the Pennsylvania Hospital, shortly after he had regularly entered on his studies, through the influence of his uncle, Samuel Coates (then an influential manager of that Institution) and of some other of his relatives residing in Philadelphia, young Hartshorne was appointed to fill it, and on the 27th of the 7th month, 1801, he entered the Institution as resident apprentice and apothecary.

The Pennsylvania Hospital was at that time the only medical and surgical establishment of much note in the country, and it had deservedly attained a high character. His situation in this hospital, under the supervision and instruction of such men as Park, Rush, Wistar, Shippen, Physick, and Barton, placed him under the most favorable circumstances for prosecuting his studies, and acquiring at the bedside of its patients a correct knowledge of disease, and of the value of the theories and practice inculcated. While assiduously performing the responsible duties that devolved upon him, he prosecuted his studies with untiring industry, laboring diligently to master the varied branches of medical science, so that, when the time should arrive for him to go forward as a candidate for the degree of Doctor of Medicine, it might be with the conviction that his time and opportunities had not been wasted. It was thus that he laid the solid basis of his future usefulness and his well-earned fame. In after life, he greatly profited by his proficiency in surgical anatomy, which at this time was a deeply-absorbing subject of his study, and to the students whom he received into his office, he was accustomed to insist with great earnestness upon their being thoroughly grounded in anatomy and physiology, as the foundation upon which all true medical and surgical skill should rest. And we may indulge the passing remark that in the great multiplication that of latter years has been made of the branches of medical study, though the aggregate amount of knowledge acquired by the student may be increased, yet it is less favorable to the attainment, within the limited time devoted to the curriculum, of that perfection in the above-named branches, which characterized some of our eminent practitioners who have of late years passed from the stage of action.

In the spring of 1805, Dr. Hartshorne received from the University of Pennsylvania, where he had attended the regular courses of lectures, the degree of Doctor of Medicine, having presented an experimental thesis on atmospheric air, which, in accordance with the custom of the time, was published in pamphlet form, and is still preserved.

He continued in the hospital after graduation, as Senior Resident Physician, still prosecuting his studies. During the last twelve months of his residence there, in addition to the charge of those claiming his attention in the house, he attended

a large number of out-door patients; to perform which service, the institution furnished him with the use of a horse and gig. In this capacity of out-door physician, he had under his professional care, during the year, seventeen hundred patients, whose cases are still on record, on the books of the hospital. The Hospital Library, which then, as now, was perhaps the most extensive and valuable collection of medical works in this country, had during his apprenticeship received a large share of his care and attention, being under his special charge; and it was by him that the first attempt was made to arrange the books systematically; and its first catalogue was prepared by him. Towards the latter part of his residence in the hospital, amid the pressure of his other duties, he prepared and published the first American edition of *Boyer's Treatise on Diseases of the Bones*, with notes and additional plates; a work which, at the time, received the approbation of most practical surgeons in this country.

The splint recommended by Boyer for fractured thigh was in occasional use in the hospital, though nearly superseded by the modification of Desault, Physick, and Hutchinson. The imperfections of each could not escape the notice of those to whose lot it fell to apply and adjust them. To obviate these imperfections, and the evil consequences resulting from them, Dr. Hartshorne contrived a modification and addition to Boyer's apparatus, which may be said to have completely remodelled and greatly improved it. The instrument as altered by him has been in use ever since, and is familiar to every practical surgeon amongst us.

Some weeks prior to the expiration of the time for which he had been elected in the hospital, an opportunity having presented for his making a voyage to Batavia, in a merchant vessel, as surgeon and supercargo, he applied to the Managers for permission to resign his station, which was granted, and a certificate signed by them individually, and having the corporate seal of the Institution, was presented to him, in which, after speaking of his conduct, during his residence there, as having been uniformly such as to merit the entire approbation of the managers and patients, and to secure to him their highest esteem and respect; and that by diligent application to study, he had become well versed in the theory of medical science, they further say:—

"In the practical duties of his profession, he has displayed, under the inspection and advice of six of the most eminent physicians of Philadelphia, a skill seldom to be met with in practitioners of his years. From a well-founded confidence in his abilities and fitness for the charge, the care of the out-door patients has been intrusted to him exclusively, during the last year of his meritorious services; and the uncommon success with which his practice was marked, left us no cause either to regret or to diminish our confidence in him."

Bearing in mind the exalted professional standing of the six physicians referred to in this certificate, who doubtless had originated or confirmed the eulogistic opinions therein expressed, we must admit that it is a valuable and highly honorable testimonial to the high character for talents and skill which Dr. Hartshorne had already attained.

Dr. Hartshorne was absent on this voyage a little more than ten months; and, not long after returning from it, he again embarked in the same capacity, on a second voyage to India, which occupied him a little more than a year, during which time he resided three months in Batavia.

During these visits to Batavia, he availed himself of the opportunity afforded to make himself fully acquainted with the diseases of that climate, especially with the malignant fevers and bowel affections so prevalent and fatal at that port.

On two occasions during these voyages, his strict integrity and his firmness were severely tested. Once as supercargo, while seeking a freight for his vessel, he was offered a valuable consignment of specie from the Dutch Colonies, which was then a monopoly of the government, and, of course, under restriction. The terms proposed were so extremely advantageous, that he became convinced the consignment must have been surreptitiously obtained without paying the government dues; and he at once refused the offer, though aware that its acceptance would have secured him an ample competence without risk of subsequent difficulty.

On another occasion, while on the voyage home, a difficulty having occurred between the captain and crew, on account of the character and short allowance of their rations, as medical officer, he took part with the latter, and inflexibly adhered to what he believed right, until redress was obtained, though he was

for some time confined therefor to the forecastle of the ship, and would have been put in irons, but for the threats of the crew, whose interests he was defending.

Upon his arrival from this last voyage, he settled in Philadelphia, and entered upon the practice of his profession. Meeting, however, with but little encouragement, and fearing lest the emoluments of his professional labors might not prevent him from becoming involved in debt, to which he had a great repugnance, after depending upon his practice alone for a short time, he entered into partnership with an old acquaintance and friend for the purpose of carrying on the business of apothecary and druggist; a connection which, however improper and unprofessional now, was not considered objectionable, nor was it an unusual thing, at that time. Attention to the duties of his profession, and to the demands of the business of a store, were altogether incompatible; and the enterprise not proving successful, after continuing it between two and three years, he abandoned it, and again opened an office in the southwestern part of the city, near his old home in the hospital. For a considerable length of time after this second outset, his practice was almost exclusively confined within the narrow circle of his relatives and a few warm personal friends; and as, owing to his incapacity for much walking, he was obliged at once to incur the expense of keeping a horse and gig, he was so much discouraged as to be almost ready to abandon his profession in despair. His father, who in consequence of repeated losses by fire had become much reduced in his circumstances, anxious on account of the difficulties that were pressing upon his son, and which he feared he would be unable to overcome, wrote to him urging him to return to Alexandria, and make trial of prosecuting his labors as a doctor in his native town, offering him a home under the paternal roof. But Dr. Hartshorne was too independent and too self-relying to be willing to relinquish the course he had marked out for himself, or to become a pensioner on the bounty of even a beloved parent; he therefore declined the invitation (unless, as he said in reply, he could bring with him bank notes enough to paper the walls of the largest room in the house), and continued at the post he had selected. It may be mentioned, as an incident exemplifying the dislike of display which was one of the prominent features in his character, that, during this time,

although ardently devoted to the practice of his profession, and entirely dependent upon its proceeds for defraying his expenses, he yet, for five years, declined having any door-plate or sign attached to his place of residence; relying on the notoriety he might obtain by his success in practice; and satisfying himself, and endeavoring to satisfy his friends, by asserting that those who sought for him could readily find his place of abode, and the patronage of others he did not wish to appear to solicit. We can readily admit that this was carrying his dislike of display, or his feeling of independence (if such it might have been), to excess; but the event happily proved that his reliance upon himself, and upon the good sense of the community to appreciate his ability and attainments as a physician, was not misplaced.

We have already mentioned the great number whom he had visited and prescribed for, while acting as out-door physician to the Pennsylvania Hospital; among these he had secured many friends and admirers, who were again glad to avail themselves of his professional skill. These, though unable to return him a fair compensation for his services, nevertheless gave him occupation for part of the time that might otherwise have hung heavily on his hands, afforded him the opportunity for acquiring further medical experience, and prevented him, by what fees they could afford to give, from being dependent; and in process of time were not a little instrumental in bringing him more prominently before the public notice. Dr. Hartshorne always spoke warmly of these his earliest employers and patrons, and especially of the Irish among them, whose confidence in his skill he had secured to an almost unbounded extent, attributing to them no mean agency in founding for him the extensive practice which he afterwards obtained. In connection with this fact, it may not be inappropriate to remark, what every young practitioner should bear in mind, that success in the practice of medicine does not depend upon the early patronage of the rich, or what are called the higher classes of society; but that a reputation securely based upon true professional worth, and slowly acquired by scientific, conscientious, though irksome labor among those in the middle and poorer walks of life, is almost sure to command the homage of the wealthy, in their hour of need, even of those among

them who have before betrayed their ignorance by the employment or encouragement of charlatans and quacks.

In 1812, Dr. Hartshorne had been so far successful as to realize a practice sufficiently lucrative to meet all the demands upon him, and to give promise of permanent and profitable increase. But with this cheering prospect opening before him, he was unexpectedly called on to relinquish, for an uncertain and probably extended length of time, the favorable position he had attained by so much toil and self-denial. One of his intimate friends, who had manifested a strong and unwavering interest in his welfare, was suffering from disease of his lungs, threatening his life, for which it was thought advisable that he should make a voyage to Charleston, and from thence to Madeira. As it was deemed unsafe for him to go without a medical adviser in attendance, Dr. Hartshorne at once offered his services, the more gladly availing himself, now that his friend was suffering, of the opportunity to repay the kindness that he had shown to him. The voyage to Charleston proved tedious and boisterous, occupying thirty days, during the most of which time his friend was extremely ill, requiring his unremitting attention; but after their arrival in that city the doctor had the pleasure of witnessing his friend's gradual restoration to health, so that it was deemed unnecessary for them to carry out the original intention of proceeding to Madeira; and, after an absence of nearly two months, the doctor returned to Philadelphia, to resume once more the duties of his profession. In a letter to his friend the late Dr. Betton, of Germantown, alluding to his absence, he says: "I was nearly two months absent from the city, and my business has suffered considerably by it; so far, however, from regretting that I have made this voyage, I consider it the most fortunate event of my life, for young ——— was one of my warmest friends; to his exertions I am indebted for the first steps that were taken to introduce me into the hospital, more than ten years ago, and very often since have I experienced from him the most disinterested and essential assistance."

In 1813, Dr. Hartshorne was married to Anna Bonsall, a daughter of Isaac Bonsall, of Philadelphia, and his practice, both as physician and surgeon, from that time rapidly increased.

In 1815 he was, without solicitation on his part, elected one of the surgeons of the Pennsylvania Hospital, his colleagues

being Dr. Physick and Dr. Dorsey. This appointment brought him more prominently into public notice as a practical surgeon, and his receipts from that branch of the profession steadily increased, while his reputation kept equal pace with his pecuniary success.

Upon the death of Dr. Wistar, in 1818, Dr. Hartshorne succeeded him as attending physician in a large number of families that had heretofore employed that accomplished practitioner; and, upon the surgical chair in the University of Pennsylvania being vacated by the resignation of Dr. Physick, who at his own request had been transferred to the chair of anatomy, Dr. Hartshorne became a candidate therefor. The canvass by the respective competitors was an exciting one, and when the election took place, Dr. Hartshorne fell short by but one vote of the number that placed the present incumbent in the station which he has so long held in that Institution; and it is no disparagement to the latter to say, that the strong desire to transplant from a neighboring and rival school one who promised to contribute much to its rising reputation, was at the time generally understood to have been the principal cause of Dr. Hartshorne's defeat.

He has often said that his failure on this occasion was fortunate on many accounts, and that his private practice was immediately and very decidedly augmented after it; so much so, that he would never have been willing to carry on the two together, even if the additional crowd of patients had been still disposed to seek him.

In the year 1820, our city was visited by the yellow fever; and from that period up to 1830, there was a remarkable prevalence of epidemic diseases. Influenza of an aggravated character, as well as bilious fever in its various forms, visited, at short intervals, most parts of our country; and the city of Philadelphia, with its adjacent districts, repeatedly suffered severely from their inroads. Of the many eminent physicians who, during that time, resided in our city, there was perhaps no one more constantly occupied with the duties of his profession, few as much so, as Dr. Hartshorne. The calls upon him, either as attending or as consulting physician, were not only numerous from all parts of the city and districts, but he was constantly resorted to from that section below the city known by the name of "The

Neck," (with the inhabitants of which he had long been extremely popular,) as well as from different parts of the neighboring country. In addition to the great amount of business thus heaped upon him, he was frequently consulted through letters by physicians at a greater distance. Some idea may be formed of the extent of his practice in the course of that time, from the fact that, during the course of a single autumn, he prescribed for over two hundred and eighty cases of fever alone, nearly all of which were under his personal care and attendance. The constant demand made upon his time by his private practice rendered it necessary for him to give up his appointment as surgeon in the hospital, and in 1821 he accordingly sent in his resignation, after a connection with it, as apprentice, resident physician, and attending surgeon, of nearly twelve years.

In our country, where the title of Doctor of Medicine is so readily obtained, and is so often assumed by those who are unrestrained by principle from resorting to any means for obtaining notoriety; and, with a public appetite not a little voracious for medical novelties, the amount of income derived from the business of prescribing medicine can hardly be considered as a fair criterion for judging of professional celebrity and employment. But, if we bear in mind that the difference between the usual compensation here, and that of a physician in London, is the ratio between a dollar and a guinea, we may safely infer, from the income he realized, that Dr. Hartshorne's practice, when most flourishing, was quite equal to that of any modern physician or surgeon who has been most popular in England.

The life of a physician, thus closely occupied, must necessarily be one of great anxiety and of almost uninterrupted toil, both mental and physical; calling for great self-denial, and the sacrifice of a large share of those enjoyments that are to be found only within the quiet scenes of the domestic circle. Passed at the bedside of his languishing patients, in the contaminated atmosphere of the sick chamber; exposed, even in the abodes of the rich, to the vexations and disappointments arising from the prejudice of ignorance and the excitement of ill-regulated passions, he must not falter in his duty as a minister of good, but give the utmost efforts of his eye, his ear, his sense of touch, his intellectual powers, and his attainments, to analyze

the symptoms of each successive case claiming his care, discover the secret source of disease, devise the remedies that shall mitigate the anguish of pain, soothe the wretchedness of sickness, and ward off the stroke of death. Day after day passes on in the wearisome performance of the invaluable services inseparable from the ministration of his high office, involving, in the course of years, the health and life of thousands of his fellow-beings; and yet, throughout his whole career, there may probably have been nothing done calculated to catch the public eye, or elicit the applause of the multitude; nothing which may not be recorded in the simple sentence, '*He knew his duty, and performed it;*' and, independent of the gratification arising from the conviction that that duty has been done, too often he must rest content, if, when the hour of suffering and dismay has passed, he is either disregarded or forgotten by those to whom, under the blessing of Divine Providence, he has been the instrument of restoring health, and the enjoyments to which it only can give zest.

It was thus that so many years of Dr. Hartshorne's life were passed; the reputation for skill and experience which he had acquired adding to his multiplied cares, and securing a continual interruption to rest or pleasure. He continued to devote the untiring energies of his powerful and cultivated mind to the duties and responsibilities of a wide-spread practice, never relaxing in the course he had marked out until the time arrived when he too was obliged to succumb to the inroads of sickness and the shadow of death.

It has been alleged against him as a fault, that he did not spend sufficient time in his patients' chambers, and manifested too little interest in everything appertaining to their welfare or feelings, except so far as it related to their restoration to health. It may be acknowledged that it was not accordant with his natural disposition or his habits to enter into prolonged or desultory conversation at the bedside, his attention being there directed to the investigation of disease, and prescribing for its relief; nor would his numerous engagements, rendered so much more onerous as they were by his difficulty of walking, admit of it; and the bluntness and apparent sternness which we have already noticed, prevented many even of those who placed implicit reliance in his judgment, and always called upon him in sickness,

from becoming familiar or on easy terms with him. But his heart was capable of the deepest and the finest feelings, and there were few who sympathized more keenly or more sincerely with those who suffered, or were more willing to sacrifice their own comfort in order to afford relief, whether the sufferer was among the rich or the poor.

Dr. Hartshorne enjoyed an unusual share of health throughout the greater part of his life. In consequence of its being necessary for him to ride, he had for many years declined going out after his bedtime, except in particular cases, to his old friends and employers. His carriage was always kept in waiting until ten o'clock in the evening, and he rarely retired to bed until near midnight; but he could not bear his sleep to be disturbed, and, after retiring, he was unwilling to be called up. It was an extremely rare thing for indisposition of any kind to detain him for a single day from his professional calls, and until within a few of the latter years of his life, he never left the city either for pleasure or rest.

In the autumn of 1848, he was called to attend in consultation several persons residing a few miles out of town, and was attacked repeatedly with chills, coming on at irregular intervals, and followed by jaundice; but, as his strength did not appear to be much impaired either by the disease or by the remedies employed to remove it, he abated but little in attendance to his usual avocations. In the course of the succeeding winter, he had one or two slight attacks of indisposition, and in the spring of 1849 the chills and jaundice returned, accompanied with severe pain and distress of stomach, and followed by an indistinct eruption, giving rise to severe irritation. Prior, however, to the appearance of the cholera in the summer of 1849, he had apparently regained his wonted good health, and he bore the laborious and harassing duties crowded upon him during the prevalence of that epidemic far better than either he or his friends had anticipated. But as the season of the year at which the disease had made its first onset came round, it was marked by a return of the irregular chills, followed by fever, with gastric pain and vomiting, disappearing or abating after the development of the cutaneous irritation, which was rendered much more perceptible by its intense burning and itching than by any manifestation to the eye. He succeeded in obtaining

relief more or less speedily from each attack, so as again to return to business, sometimes after the lapse of a few days, sometimes after a confinement of one or two weeks. Throughout all these repeated attacks, his appetite remained unimpaired, except while immediately suffering from the pain and vomiting. His strength, however, was gradually breaking down, and it was doubtless more irreparably undermined by allowing his habits of incessant occupation, and of unvarying attention and punctuality to professional business, to prevail over the dictates of prudence and the indications of disease, and thus he kept himself in his carriage and under the fatigue and anxiety of practice when his proper place would have been the sick-bed. This course was persisted in to the last day of his capacity to stand upon his feet. From the paroxysmal character of the malady that was preying upon his life, he often felt comparatively well in the morning, and starting out to see some one who was anxiously soliciting his visits, he would frequently be taken sick while either in his carriage or the house of his patient, and be obliged to hasten home to be again prostrated in bed; or, on a day of apparent convalescence, he would make an appointment for consultation with some one of his medical brethren, perhaps on the next day; and, when the time arrived, however he might be suffering from increased indisposition, if at all able to go, he felt himself bound, and would insist on keeping his engagement; and there can scarcely be a doubt that by these means he accelerated the progress and the termination of his disorder.

Early in the summer of 1850, finding that the frequent, severe, and protracted chills, the intense pain in the epigastrium (never relieved but by vomiting), the jaundice, and cutaneous irritation had completely sapped his strength, he decided to withdraw altogether from the practice of his profession; not, however, without looking forward to returning to it again—still hoping that, as he had recovered from so many severe attacks, his naturally vigorous constitution might finally triumph over his disease. Throughout the whole course of his illness, though assiduously waited on by his sons, Drs. Edward and Henry Hartshorne, and visited by Drs. Shallcross and Goddard, who kindly proffered every assistance in their power, he directed the whole course of treatment himself, and patiently resigned himself to whatever might be the event. As a last resort, in the

sixth month, he was removed, at his own request, to the Brandywine Springs, in the hope that the change of air and freedom from the heat and noise of the city might assist in re-establishing convalescence. But every effort to abate or resist the slow but sure ravages of his malady proved unavailing, and after lingering until the twentieth of the eighth month, he departed this life, lacking four months and six days of being seventy-one years of age.*

Having always been a member of the religious Society of Friends, Dr. Hartshorne's views on the all-important subject of religion were in conformity with the principles held by that body; and it was in the redemption that comes by Jesus Christ alone, that he was enabled to rest his hopes of realizing the joys of heaven when done with the toils and trials of earth.

Although when free from unusual care he was generally cheerful, and, notwithstanding his grave demeanor in the sick room, often indulged a native hilarity, yet the cast of his mind led him to much serious reflection, and its kindred reading. A considerable portion of the leisure hours of the latter years of his life was occupied in the study of biblical literature, and of standard works on religious belief and experience. Decided in his own views, he was yet willing to become acquainted with those of others, while he strove to live in charity with all.

We have, perhaps, already said sufficient to give a general outline of Dr. Hartshorne's life and character as a physician; and we may confess that we feel it to be not an easy matter, so to fill up the sketch as to convey a full and correct idea of them to those who were personally unacquainted with him. We may, however, further observe, that no one capable of appreciating such knowledge could be long associated with him, without being convinced of his extensive and exact knowledge of the principles governing the science of medicine; of his diagnostic acumen, and clear perceptions of the changes effected by disease; together with a thorough familiarity with the art of applying, in the most successful manner, those agents most effective in arresting and removing it. Hence, in the sick room, he was

* Post-mortem examination revealed the liver to be generally diseased, the gall-duct greatly enlarged, and several stones or concretions in the gall-bladder.

distinguished by the facility with which he made himself acquainted with the nature and extent of the case before him, by the exercise of great sagacity, close observation, and the well-remembered teachings of a large experience; arriving at conclusions which, although not universally correct, because no human judgment is infallible, the event seldom proved to have been erroneous; and having satisfied himself of the character of the malady with which he had to combat, while always moving with great caution, his course was unhesitating, and regulated by principles from which nothing would tempt him to swerve. As a surgeon he was prudent, but never timid, and he was ever anxious to avoid the knife, when he thought it could be safely dispensed with. He was a decided and strong advocate for the use of the lancet; not resorting to it, however, empirically, without reference to the existing state of the constitution, and of the various organs of the body, but always with precise views in its application, and having a distinct and satisfactory reason for its use. He was aware of there being an impression abroad that he had, from habit, carried the use of this powerful remedial agent too far; but, after renewed consideration of the subject in all its bearings, his convictions of the correctness of the course he had pursued were confirmed; and in a conversation held with the writer, a short time previous to the commencement of his last illness, he remarked that, upon a careful review of his extensive practice, he could recall no single case that caused him any regret for having bled in it too freely, but there were many in which he feared he had erred either by not bleeding in them at all, or having deferred it until it was too late.

Being solicitous of keeping pace with the progress of medicine, so far as his numerous engagements would admit, he was a frequent and discriminating reader of the medical publications of the day; gladly availing himself of the thoughts and experience of others; though the impulse of his own mind prevented him from circumscribing his reasoning upon the subject, within the limits marked out by the author he was perusing, and his reliance being chiefly on the deductions of his own mind, whether in agreement or opposition to the opinions of others, he was necessarily prevented from becoming a mere imitator.

The great confidence which his professional brethren reposed in his judgment was evidenced by the frequency with which

they resorted to him for advice in consultation; in the latter part of his life this constituting a large part of his practice. And in this intercourse with other physicians, while he never concealed his sentiment for reasons of policy, or appeared to acquiesce in what he really disapproved, for fear of infringing on the laws of politeness, yet he invariably treated all with candor and becoming deference, and was always ready to listen to whatever was offered in relation to the facts connected, or remedies proposed, in the case.

Satisfied that, with all his boasted talents and acquired skill, the efforts of man for warding off the approach of death, or for restoring health and strength, were unavailing, except as they were rendered effectual by the blessing of the Almighty, he freely acknowledged the obligation resting upon us to make those efforts with reference to their receiving that blessing. But while he thus confessed the limited powers of human agency in the dispensation of life and health, he nevertheless entertained a high estimate of his profession, and regarded it as a noble art, which conferred some of the choicest blessings on mankind: and in proportion to this high estimate was his contempt for and opposition to quackery in all its phases; and he failed not to speak in the most decided terms of disapprobation of those members admitted within the ranks of the profession who countenanced or who refused to oppose it.

Dr. Hartshorne was in the habit of recording nearly all his prescriptions from day to day, and of keeping notes of many of the remarkable cases which came under his care, generally introducing them into his account-books, which have them scattered throughout their pages; but his contributions to the press were very few, and those were made in the earlier years of his career.

We have already spoken of his improvement in Boyer's apparatus for fractured thigh; but though referred to by other surgeons in their works, it does not appear that he ever published any description of it. In the first volume of the *Eclectic Repertory*, published in 1811, is an article by him, in which he describes his mode of preparing a decoction of cantharides in spirits of turpentine, and recommends its use for keeping up the regulated stimulation of large surfaces, and giving cases in which he had employed it with advantage. In vol. iii. of the same work, he proposed the use of caustic potash issues for promoting ossific

union in cases of ununited fracture, where Physick's seton was not admissible; and, in the 7th volume of the same work, he recommends the use of caustic along the spine in cases of tetanus; in both instances narrating cases exemplifying the effect of the proposed treatment. He also proposed the operation for the cure of varicose veins of the leg, by excision of a portion of the saphena vein. In the 3d volume of the *Repertory*, is an article by Professor Chapman, detailing a number of cases of amenorrhœa cured by the exhibition of the senega snakeroot, which he says he had been induced to make trial of in this disease by the recommendation of Dr. Hartshorne, who had discovered its emmenagogue powers. Dr. Hartshorne also devised the preparation of opium in vinegar and alcohol, known as Hartshorne's Acetated Tincture of Opium; and he was mainly instrumental in calling the attention of physicians, in this country, to the use of nux vomica in cases of paralysis.

Dr. Hartshorne was elected a member of the Philadelphia Medical Society in 1805, of the American Philosophical Society in 1815, and of the College of Physicians in 1824. He served as Treasurer to the College for several years; was upon one of its committees for revising the Pharmacopœia, and repeatedly served on other of its committees; and though he rarely took part in debate, yet he was at one time an active and influential member.

From the sketch of the life which we have now given, imperfect as it confessedly is, we think the lesson may be drawn, that every physician, whatever his station may be, but more especially those in the junior walks of the profession, should aim at eminence therein; and, under whatever unfavorable circumstances he may be placed, he should warm his heart and animate his endeavors with the conviction that success depends far more upon the native force and independence of character, upon untiring industry in the acquisition of a correct knowledge and application of the principles governing the science of medicine, and withal upon a straightforward honorable course of conduct, than upon the smiles of early patrons among the rich, or the fickle whims of fashion; and that, as he cherishes and acts upon these ennobling qualifications, he may look forward with confidence that they will force their way before the public attention, and finally secure him the success he deserves.

SUMMARY

OF THE

TRANSACTIONS OF THE

COLLEGE OF PHYSICIANS,

OF PHILADELPHIA.

FROM NOVEMBER 4, 1851, TO JANUARY 6, 1852, INCLUSIVE.

Stated Meeting, November 4th, 1851.

Dr. Wood, President, in the chair.

Present, twenty-five members.

Henry Hartshorne, M. D., was duly admitted a Fellow.

The Library Committee reported the receipt from the Sydenham Society of London of:

Anatomia Uteri humani Gravidi tabulis illustrata; Auctore Giulielmo Hunter. Folio.

Dr. Page exhibited the diseased portion of a cancerous penis recently excised by him.

Dr. Parrish related the following case of

MALIGNANT PUSTULE OF THE FACE

That occurred in a lady to whom he had been called, in consultation with Dr. S. McClellan, and which presented some remarkable features. The patient was a married female of about middle age, and the mother of several children, of rather lax fibre, but of ordinary health, who had been attacked with an inflammation on the right side of the upper lip, which became

swollen and elevated, with hardened base, and very painful. For the first few days, it was thought to be a common boil; but, instead of softening and pointing, it enlarged and grew harder, and the strength of the patient became much reduced.

At this stage, Dr. McClellan was requested to prescribe. It then exhibited very much the appearance of an anthrax, was hard and angry looking, with a tendency to lividity. Dr. McClellan prescribed accordingly, without any apprehension as to the final issue.

The patient kept about, though occasionally complaining of great debility. On visiting her one morning, the Dr. found the redness extending to the face, and evidently spreading; the pulse was rapid and feeble, and the patient complained of feeling very weak. A more active course of tonic and stimulating treatment was instituted; but the inflammation continued to spread, until in a few hours it had invaded the face and scalp. On the same evening, I was requested to see her. The features were now obliterated by a puffy œdematous swelling extending over the head; the patient was highly delirious; pulse exceedingly rapid and feeble, and in a few hours she expired.

A short time after, I was called to see an elderly lady, residing a short distance from the other patient, with a hard, angry-looking tumor in the same situation on the lip; and, so far as I could judge from the description of the first case, very similar in appearance. I immediately placed the patient on a full diet, with wine, porter, &c., applied lye poultices, and quieted the pain by opiates. In a few days, the tumor assumed a milder form, and finally suppurated, though the patient was very much reduced in strength.

I mention these cases, to place the Fellows on their guard against this form of disease, should they meet with it. Neither Dr. McClellan nor myself had seen a similar one, and its rapid and unexpected termination was well calculated to make a strong impression on our minds. Whether there was anything differing from an ordinary anthrax in these cases, I will leave the College to judge; if there was, I am not prepared to classify it.

The following gentlemen were elected the Committee of Publication for the ensuing twelve months: D. Francis Condie, Isaac Parrish, Samuel Jackson.

A communication was received from the gentlemen composing the Committee on Subscriptions, towards the Monument to be erected to the memory of Dr. EDWARD JENNER, the discoverer of vaccination, requesting contributions from the Fellows.

Dr. PARRISH read the following

BIOGRAPHICAL NOTICE OF WILLIAM B. WILSON, M. D.

Dr. WM. B. WILSON was born in Philadelphia in the year 1820. He received the first rudiments of education at Crawford's school, and was sent, before he reached his tenth year, to the Roman Catholic College at Emmetsburg, Md. Here he remained nine years, received an excellent education, and graduated as Master of Arts. He also imbibed at this institution the doctrines of the Catholic Church, in the faith of which he continued up to the period of his death.

After the completion of his course of instruction at Emmetsburg, he commenced the study of medicine in Harrisburg, where his family at that time resided, and became the private pupil of Dr. Riley of that place. About the year 1840, he came to Philadelphia, and entered as a student at the University of Pennsylvania, where he graduated in the year 1843.

In the same year, he was elected one of the resident physicians at the Blockley Almshouse; in which position he displayed a devotion to medical pursuits, with a humane and self-denying attention to the sick and destitute who claimed his care, which won for him the high esteem of the officers of the institution. It is the testimony of those who watched his course there, that no young man ever discharged the duties of the post more faithfully and conscientiously.

After leaving the Almshouse, Dr. Wilson settled as a practitioner in Philadelphia, and for the last five years of his life was my near neighbor in Arch St.

The incidents of his career during this period, though they furnish nothing remarkable or striking, would give us the history of a young man without fortune, or any extraneous aid, gradually rising by his own merits, and by indefatigable industry, to a respectable and increasing practice; when failing health and flagging strength admonished him to lay aside his armor, and prepare to leave the field, into which he had just entered.

The gradual inroads of that great destroyer of our race, pulmonary consumption, were too evidently impressed upon the lineaments of our friend, to escape the observations of those most nearly allied to him, and he himself (unlike many of the victims of that disease) watched its ravages upon his frame, and calmly submitted himself to the result. For a year before his death he withdrew from active practice, and spent most of his time in the midst of his family, though continuing to keep about to the last. Just after his arrival in Philadelphia from a visit to a sister in Washington, he partook with unusual relish of a plentiful dinner; and before rising from the table was seized with a profuse hemorrhage from the lungs, the blood gushing from his mouth and nostrils, and in a few moments overpowering the lungs themselves.

Before he could be placed on a bed in his chamber, life was extinct. This event occurred on the 7th of the 5th month, (May,) 1851, in the 31st year of his age.

Dr. Wilson was elected a member of the College at the December meeting, 1849, and had attended but few of our meetings; he was, indeed, personally unknown to many of the Fellows. Yet he possessed qualities both moral and intellectual of a high order, and would, I doubt not, had his life been prolonged, have become a valuable associate.

Dr. Wilson held, during his short life, several responsible medical appointments. In 1849 he was elected, by the Board of Health, Physician to the City Hospital on Bush Hill, and, during the cholera epidemic of 1849, he was appointed by the same Board to the important post of one of the Physicians to the Cholera Hospital in Cherry St. He was also elected one of the Attending Physicians of the Wills' Hospital. In these situations he manifested a degree of self-reliance and judgment which marked him as a promising physician, and secured for him the friendship of many of his medical brethren. At his death, the Board of Health passed resolutions expressive of their sense of the "excellencies and virtues of his private character, as well as his superior medical attainments."

Dr. Wilson was a man of unassuming manners and of retired habits, and seemed instinctively to shun the frivolities of the gay and fashionable world. It is rare, indeed, to meet with a young man, in any circle of society, of more chaste and refined

feelings, or of a higher moral tone. He was strictly upright and honorable in his intercourse with his medical brethren, and shunned high pretension and charlatanism in medicine, as he would low or coarse company.

We believe that he fulfilled his mission on earth with a full sense of its responsibility, and with a desire to benefit his fellow-beings; and when the time arrived for him to relinquish his hold on the things of time, he acquiesced with cheerful submission, and with a religious trust in the mercy and goodness of his Heavenly Father.

A conversation took place among the Fellows present on the use of anæsthetics.

Special Meeting, November 18th, 1851.

The College was assembled upon the call of the President, in consequence of the death of Dr. JOSHUA M. WALLACE, one of its Fellows.

DR. WOOD, President, in the chair.

Present, twenty-four Fellows.

The object of the meeting being stated from the chair, the following Preamble and Resolutions were unanimously adopted:—

Whereas, by the sudden demise of DR. JOSHUA M. WALLACE, we have been called upon to mourn the loss of one of our most esteemed colleagues, we feel it due to ourselves, to the memory of the deceased, and to that profession of which he gave so fair a promise of becoming one of the brightest ornaments, had not his career of usefulness been so unexpectedly cut short, to give an expression to our sentiments in reference to this melancholy event: Therefore,

Resolved, That, in the death of Dr. Joshua M. Wallace, we mourn the loss of a colleague who was endeared to us by the

dignity of his moral deportment, by the suavity of his manners, and by his professional attainments and skill.

Resolved, That we condole most sincerely with the family and relatives of the deceased, and tender to them our warmest sympathies in their severe bereavement.

Resolved, That Dr. FRANCIS G. SMITH be requested to prepare a biographical notice of the deceased, to be read before the College.

Resolved, That a Committee of three Fellows be appointed to communicate the above Preamble and Resolutions to the family of the deceased.

Resolved, That when we adjourn, we adjourn to meet to-morrow morning at 7½ o'clock, at the late residence of the deceased, to pay the last tribute of respect to the remains of our departed Fellow.

Drs. J. Neill, F. West, J. B. Biddle were appointed the committee under the fourth resolution.

Stated Meeting, December 2d, 1851.

DR. WOOD, President, in the chair.

Present, thirty members.

The following works were presented to the Library:—

A Memoir of Samuel G. Morton, M. D., delivered by Dr. Charles D. Meigs. Presented by the Academy of Natural Sciences.

Lectures on Scarlet Fever, by Caspar Morris, M. D. Presented by the Author.

Dr. BOND presented the following:—

OBSERVATIONS ON THE TOPOGRAPHY, &c., OF PARÁ, BRAZIL.

A friend and relative, Mr. Henry B. Dewey, who has resided about seven years at Pará, Brazil, has communicated to me the meteorological journal which he has kept ever since he went

there; accompanied by a few remarks respecting the topography of that place. I have thought it might not be irrelevant to the design and pursuits of this College to lay before it his remarks upon the locality, and some summaries derived from his observations.

The city of Pará (formerly called "Santa Maria de Belem do Gram-Para," *i. e.*, the City of Saint Mary of Bethlehem of Grand Pará) is situated in latitude 1° 28′ south, and 48° 29′ west longitude from Greenwich, about eighty miles from the ocean, on the south side of the southern mouth of the River "Amazonas." This mouth is commonly called the Pará River, but it is strictly a part of the Great Amazon. The breadth of the river at the city is about nine miles, and is studded with innumerable islands, the nearest of which, called "Ilha das Oncas," directly opposite to the city, is three miles distant from it. These islands form a magnificent basin, which is the harbor of Pará. Great changes are constantly occurring in the river, old shoals being washed away, and new ones formed. A few years since, there existed an island a few miles below the city, called "Parroquet Island." This has disappeared, and vessels of the largest burden can pass over the spot where it once stood, there being seven fathoms of water. But on the other side of the channel, where vessels formerly passed, a large island has appeared within a few years, already covered with trees of no small size, called "Ilha Nova." The tide rises at the city about eleven feet.

The country in this region is low, and is covered with magnificent forests; indeed the entire province may be said to be an almost unbroken forest, with underwood of such density as to render a passage utterly impossible, except by the footpaths of the natives. The birds of this region are of great beauty, and for an ornithologist (as well as entomologist) this province presents a field of unrivaled richness.

The water of the springs is unsurpassed by any in the world; and the river is always perfectly fresh, except at high spring tides, when it becomes rather brackish. The water of the river is exceedingly turbid or muddy; but, at low tides, springs of water, pure as crystal, may be seen gushing from the sands.

Although some distant districts are greatly afflicted with intermittent fevers, &c., no place can be found which enjoys a

greater exemption from diseases than the city of Pará and the surrounding country; and there is, perhaps, no place having a greater uniformity of temperature. Situated so near the equator, the changes in the barometer are almost imperceptible, the extreme variations not amounting to two-tenths of an inch in any month. I found long since, he says, that here the barometer is of no use in giving indications of a change of weather; for the mercury is as likely to rise a twentieth of an inch before a squall, as to sink that distance.

The winds are also very regular; the land breeze generally blowing during the night and morning from south to southwest, and the sea-breeze in the afternoon and evening, from north to northeast and northwest. This wind is called "Vento de Marajo," or Marajo wind, passing, as it does, over the great island of Marajo or Joannes.

TABLES

Showing the monthly and annual average temperature at Pará during fifty-three months, derived from three daily observations during that time, viz.: at 8 A. M., at 12 M., and at 8 P. M. Also the extremes of temperature in each month. Also the number of days in each month, which were with, and those which were without, rain. Also the number of inches of rain which fell in each month for fifteen months. The observer had no rain gauge in the earlier part of his observations.

1845.	6 A. M.	12 M.	8 P. M.	Mean.	Extremes.	Days with rain.	Days without rain.
January	76.10	85.77	79.81	80.56	74°—90°	28	3
February	74.86	83.07	78.28	78.77	73 —90	27	1
March	75.68	84.16	78.93	79.59	74 —91	30	1
April	76.24	85.76	79.55	80.52	75 —90	25	5
May	76.64	87.03	80.58	81.42	75 —90	26	5
June	76.31	87.07	80.61	81.33	75 —90	28	2
July	75.74	87.52	80.56	81.27	74 —90	26	5
August	75.93	86.97	80.77	81.22	74 —90	21	10
September	75.93	87.77	81.57	81.76	74 —90	17	14
October	76.13	87.37	81.83	81.78	74 —92	10	21
November	76.27	88.10	82.17	82.18	74 —92	16	14
December	76.03	86.74	80.77	81.18	75 —91	18	13
Mean of 12 months	76.00	86.44	80.55	81.33	73°—92°	271	94

1846.	Sunrise.	Noon.	8 P. M.	Mean	Extremes.	Days with rain.	Days without rain.
January	76.30	84.67	79.40	80.12	75°—88°	31	0
February	75.80	83 80	79.20	79.60	74 —89	28	0
March	75.19	81.35	78.61	78.38	73 —87	30	1
April	76.07	84.97	79.63	80.22	75 —89	28	2
May	76.74	87.03	80.74	81.50	76 —91	28	3
June	77.03	87.47	81.97	82.16	76 —91	24	6
July	77.29	90.32	83.19	83.60	73 —95	18	13
August	76.16	88.71	81.77	82.21	75 —94	15	16
September	76.10	87.98	81.53	81.85	74 —92	18	12
October	76.07	87.79	81.67	81.84	75 —92	17	14
November	76.33	87.60	81.53	81.82	75 —93	16	14
December	76.58	87.06	82.35	81.99	76 —92	17	14
Average for the year	76.30	86.55	80.96	81.25	73°—95°	270	95

1847.	Sunrise.	Noon.	8 P. M.	Mean.	Extremes.	Days with rain.	Days without rain.
January	75.81	83.58	79.87	79.75	74°—90°	26	5
February	75.00	84.64	78.36	79.33	73 —90	27	1
March	75.60	82.00	78.70	78.77	74 —90	29	2
April	75.70	82.73	78.43	78.95	74 —90	29	1
May	75.71	84.80	78.23	79.58	74 —90	30	1
June	75.40	86.71	79.41	80.51	74 —90	23	7
July	75.54	87.77	79.88	81.06	74 —93	22	9
August	76.07	88.03	80.35	81.58	74 —92	25	6
September	73.87	87.93	78.72	80.17	70 —91	15	15
October	75.84	87.23	80.19	81.09	74 —92	18	13
November	76.14	87.28	81.64	81.69	75 —90	10	20
December	75.79	86.14	80.07	80.67	74 —92	15	16
Average for the year	75.54	85.73	79.48	80.25	70°—93°	269	96

1848.	Sunrise.	Noon.	8 P. M.	Mean.	Extremes.	Days with rain.		Days without rain.
							Inches.	
January	75.71	86.45	79.58	80.58	74°—90°	30		1
February	74.90	83.66	77.07	78.54	72 —88	28	(5.175)	1
March	75.03	83.90	77.61	78.85	73 —88	28	(12.284)	3
April	75.27	82.90	77.53	78.57	74 —87	30	(14.437)	0
May	75.52	86.61	78.35	80.16	74 —90	30	(8.160)	1
June	74.70	87.17	78.63	80.17	74 —89	21	(5.270)	9
July	74.48	86.81	79.48	80.26	72 —89	21	(3.263)	10
August	74.53	88.03	80.07	80.88	72 —90	15	(3.550)	16
September	75.23	87.90	79.53	80.89	74 —90	17	(2.512)	13
October	75.48	88.29	80.81	81.527	74 —91	9	(.700)	22
November	75.67	88.90	81.00	81.855	74 —94	16	(.841)	14
December	75.74	87.06	80.58	81.128	74 —90	16	(2.353)	15
12 months	75.19	86.47	79.18	80.29	72°—94°	261 (From Feb. 16.)	(58.545)	105

1849.	Sunrise.	Noon.	8 P. M.	Mean.	Extremes.	Days with rain.	Inches.	Days without rain.
January	74.39	86.13	78.10	79.54	72°—89°	26	(6.512)	5
February	74.11	83.39	76.89	78.13	72 —88	25	(10.902)	3
March	74.61	85.48	77.10	79.06	73 —90	26	(10.896)	5
April	74.25	83.93	77.21	78 46	72 —90	26	(9.722)	4
May	75.51	86.52	78.93	80.32	74 —92	27	(12.027)	4
5 months	74.57	85.09	77.64	79.10	72°—92°	130	(50.059)	21

Of the monthly average or mean temperature of 53 months—

At 6 A. M. the highest was	77.20°	
do do lowest was	73.87	
Extent of the mean variation	3.33°	difference.
At 12 M. the highest was	90.32°	
do do lowest was	81.35	
Extent of the mean variation	8.97°	difference.
At 8 P. M. the highest was	83.19°	
do do lowest was	76.89	
Extent of the mean variation	6.30°	difference.

Extremes of temperature during 53 months 70° and 95°.

Days in	1845	with rain	271,	without rain	94
do	1846	do	270,	do	95
do	1847	do	269,	do	96
do	1848	do	261,	do	105
First 5 months of	1849	do	130,	do	21
	Total		1201		411

Quantity of rain in 12 months, from February 16, 1848 to February 16, 1849, 69.466 inches.

Quantity of rain in 12 months, from June 1, 1848 to June 1, 1849, 68.548 inches.

It was stated in the preliminary observations that the variations of the barometer are almost imperceptible. The following table shows the average mean height of the mercury for each month during one year (1848); the extreme variations in each month, and the extent of the variations in each month. One or more observations were made each day.

		Inches.	Extremes.	
January,	mean height	29.90	29.96	
			29.83	
			.13	extent of variation.

		Inches.	Extremes.		
February,	mean height	29.90	30.00		
			29.82		
			.18	extent of	variation.
March,	do	29.90	29.93		
			29.84		
			.09	do	do
April,	do	29.92	30.00		
			29.86		
			.14	do	do
May,	do	29.94	30.00		
			29.87		
			.13	do	do
June,	do	29.98	30.02		
			29.92		
			.10	do	do
July,	do	29.99	30.00		
			29.93		
			.12	do	do
August,	do	29.99	30.05		
			29.87		
			.18	do	do
September,	do	29.95	30.04		
			29.86		
			.18	do	do
October,	do	29.91	29.98		
			29.81		
			.17	do	do
November,	do	29.91	29.97		
			29.86		
			.11	do	do
December,	do	29.90	29.97		
			29.79		
			.18	do	do
Extreme variations during the year			30.05		
			29.79		
			.26		

Dr. Bond read the following communication on

FRACTURES OF THE LOWER END OF THE RADIUS, AND ON THEIR MANAGEMENT.

I ask the attention of the College to some remarks upon fractures of the radius, especially to those which occur near its carpal extremity. These injuries have a strong claim to our attention, both on account of the *frequency of their occurrence*, and on account of the *imperfect success* so often attending their treatment.

According to the statistics of M. Goyraud, these constitute one-third of the whole number of fractures. Dupuytren assigns to them, if not always the first, at least the second or third rank in point of frequency. Vidal declares that the fracture of the radius is certainly more frequent than that of any other bone. According to reports of cases in the Hôtel Dieu, Paris, for four years, they constituted one-tenth of all the fractures.

The statistics of the Pennsylvania Hospital, by Drs. Norris and Wallace, do not furnish the desired information on this subject; for they only report the fractures of the arm, without even discriminating between the arm and forearm. More precision in classification would have much enhanced the worth of these very valuable statistics. But it was not in their power to remedy defects in the records of the institution. The number of fractures treated in this hospital from 1751 to 1800 was 197, of which 34 were of the arm, which is about 17 per cent., or a little more than one-sixth. From 1800 to 1829, 868 fractures, of which 200 were of the arm, which is about 23 per cent. From 1830 to 1839 inclusive (10 years) 946 fractures (exclusive of a few cases of ununited fractures, where the part affected is not specified), of which 250 were fractures of the arm, which is more than 26 per cent. [See *Amer. Journ. Med. Sciences*, xxiii. 260; i. new ser., p. 324.] It is probable that at least one-eighth, if not one-sixth, of the whole number were fractures of the radius.

The relative frequency of these accidents in any district will vary according to the pursuits of the people, and according to the climate and season. A storm of sleet, covering the streets and fields with ice, seldom fails to produce numbers of such cases; I am informed that one storm of this kind, not long since,

besides the cases occurring in private practice, brought nine cases of fracture of the forearm into the Pennsylvania Hospital.

In a note at the end of the "Remarks on Fractures," by Dr. Peirson, is an elaborate report of the cases of fracture admitted into the Massachusetts General Hospital, from 1821 to 1840. This report exhibits a remarkable variation, in regard to the relative frequency of the fracture of different bones, from other reports that have come under my observation. It deserves an explanation by the officers of that institution.

The following is the summary of the cases detailed.

"A table showing the proportionate number of cases of each bone fractured in 367 hospital cases.

	Cases.	
Fractures of the Tibia and Fibula	95	
" " Femur	69	
" " Tibia singly	38	
" " Fibula singly	20	
		222
" " Humerus	18	
" " Radius singly	9	
" " Radius and Ulna	6	
" " Ulna singly	4	
		37
" " Cranium	19	
" " Clavicle	26	
" " Ribs	24	
" " Sternum	2	
" " Cervix Femoris	10	
Miscellaneous cases: Scapula, Cervix Humeri, Carpal and Tarsal Bones, Condyles, Olecranon, and Acromion Processes	27	
Total	367	

"This table shows there are six times as many fractures of the leg and thigh as of the arm and forearm; fracture of the leg being the most frequent accident, then the thigh, then the forearm, and lastly the arm."

As to the success attending the treatment of fractures of the radius, I have met with no statistical reports entitled to consideration, and I think we shall in vain search journals, hospital reports, monographs, and systematic works, for an accurate report of a series of such cases. There is a good reason for this; for, as I believe, few or no practitioners could render such a report, if made with minute fidelity, as would be flattering to their skill,

or speak well for the perfection of our art. According to my observation, there is no fracture, except the neck of the thigh bone, where there is so often a failure to accomplish a perfect cure, as that of the lower end of the radius. Practitioners may tell us that, although they have often *seen* deformed wrists, and rigid or anchylosed hands, *they* have had good success—have always cured; yet a critical examination of their cases would often show that there remained either more or less deformity of the radius or the wrist, a more or less complete loss of the use of the hand, or an extremely tedious recovery, much more tedious than occurs ordinarily in other fractures.

To show that I am not dealing in exaggerations, or offering opinions unsustained by the observations of others, I cite two very good American authorities. Dr. Peirson, in the work already referred to, says, "Notwithstanding the greatest care in the adjustment and treatment of fractures of the forearm, many instances of deformity will occur. Our pathological museums present an immense variety of irregular consolidations of the radius and ulna, which must have seriously interfered, during life, with their appropriate functions." In a very valuable paper of Dr. J. Rhea Barton, published in the *Medical Examiner* for 1840, he says, "I do not know any subject on which I have been more frequently consulted than on deformities, rigid joints, inflexible fingers, loss of the pronating and supinating motions, and neuralgic complaints, resulting from injuries of the wrist and the carpal extremity of the forearm; one or more of these evils having been left, not merely as a temporary inconvenience, but as a permanent consequence."

It may be asked, are these unfavorable results, so opprobious to the profession, inevitable? or may they not very often be attributed to a defect in the manner of treating them? The deformity is, I believe, almost always unnecessary. The fragments are generally without difficulty placed in apposition, in their normal relation to each other; there is no powerful counteracting force tending to derange them, when the hand is kept in a position to put the muscles in repose; and the deformity results either from the inadequacy of the apparatus, or from defective skill in its application. There may be a few comparatively rare exceptions to this, as where the lower fragment of the radius is crushed, and when this condition is complicated

with a fracture of the ulna. But there is an evil, as clearly specified by Dr. Barton, frequently succeeding these fractures, which is a much greater calamity to the patient than any slight or moderate deformity of the radius or wrist. This is a stiffness, inflexibility of the hands and fingers, which destroys their use or impairs it in proportion to the rigidity. This rigidity is sometimes unavoidable, as in cases where there has been severe contusion of the soft parts, and when occurring in elderly persons of a rheumatic or gouty diathesis.

I propose to examine the mode of treating these fractures, as now commonly practised in our hospitals, and as taught by the most recent American and English authors.

It is unnecessary to state in detail to the members of this College what this practice is. I may briefly say that it consists in the use of two long straight splints, with compresses or cushions, and bandages. The palmar splint extends from the elbow down to the extremities of the fingers. Some, however, do not allow this to extend below the second joints of the fingers. The dorsal splint extends sometimes only to the extremity of the metacarpe. When this dressing is applied, the longitudinal axis of the forearm will be continuous, or parallel, with that of the hand.

There are several objections to this mode of dressing the fracture, which I will attempt to point out. In the first place, it violates what ought to be regarded as a surgical canon in the treatment of fractures, viz., to adopt such a position as will put all the muscles, acting on the part, as much in repose, as free from tension, as possible; so that the least counteracting force will be required. 2d. The constrained position of the hand demands tighter bandaging, in order to prevent derangement of the fragments by paralyzing or subduing the muscles that are rendered tense by the position assumed. 3d. This constrained position and tight bandaging greatly increase the danger of that protracted or permanent rigidity of the hand and fingers which is a too frequent result of those injuries. 4th. This mode of dressing, by long, straight splints, not only increases the danger that it will result in rigidity, but that, when it does occur, the hand will be left unsightly, inconvenient, or useless. 5th. There is another objection to it, which will be regarded by the surgeon as of more or less importance, according as he is

actuated more or less by the feelings of humanity. I refer to the distress or discomfort which must result from a constrained position and the force applied to maintain it.

The muscles that act on the hand are least tense, or most in repose, when the hand is inclined backwards, so that the metacarpe forms a considerable angle with the forearm,* when it is also inclined inwards towards the ulnar side of the arm, and when the fingers are moderately flexed. In this case it will be perceived that the longitudinal axis of the forearm, if prolonged, would not correspond with that of the hand, but would pass through, or very near, the point, where the thumb and index finger most easily and naturally meet. Thus in the innumerable manipulations with the thumb and fingers (as with a pen, pencil, button, needle, money, &c. &c.), their points most easily and naturally meet in this axis of the forearm. This will be found to be the position of the hand, when it hangs by the side with all the muscles relaxed.

This consideration is of little comparative importance in the case of young persons, and of those who have followed no laborious handicraft; but to persons advanced in life, and to those whose muscles and joints have become rigid by hard labor, and to whom the hand is the means of subsistence, it is a point of very material importance. A large portion of these fractures occur among such patients. When such a hand is firmly swathed by a roller upon the long straight palmar splint, it is forced into a constrained position, and some of the muscles, acting on the fragments, are put into extreme tension. This condition of the muscles must act strongly on the fragments of the radius, and must tend strongly to derange them, especially when the fracture is oblique.

To counteract this tendency to displacement of the fragments on account of the tense condition of the muscles, the bandage with the compresses must be applied so tightly as greatly to increase the risk of that frequent ill success so well described by Dr. Barton.

When the hand is placed in the position above described, so as to take off tension from all the muscles, there will be so little tendency to displacement of the fragments, that a very gentle

* Malgaigne calls this *la flexion habituelle de la main en arrière.*

pressure of compresses and bandages will be adequate to maintain them in their proper relation to each other. The dressing may be removed earlier, so as to give motion to the hand and fingers, without danger of producing derangement of the fragments, and the gentle pressure of the dressing will be less likely to deprive the tendons and sheaths of their lubricity, and thus to cause permanent adhesions.

There are cases, as before observed, where such violence is done to the bones and soft parts, especially in elderly persons of a rheumatic or gouty diathesis, that it may be impossible to avoid permanent adhesions and rigidity. In such cases, if the usual authorized mode of treatment be adopted, the result will be a most awkward, unsightly, useless member.

But if the hand can be placed and retained in the unconstrained natural position above mentioned (to say nothing of the better chance of escaping permanent stiffness), *in the first place*, the unsightly deformity will be avoided; and in the *next place*, the hand will not entirely have lost its uses. For the hand, thumb, and fingers, being placed very nearly in the position of their most frequent uses, the interossei, the lumbricales, and the several short muscles of the thumb will, by causing only a very limited motion, enable the hand to perform very many of its useful functions.

I can say with confidence, not only from *à priori* reasoning, but from some experience within the last few years, that the dressing of a limb on the principles here inculcated, will very materially conduce to the comfort of a patient. I shall here make no comment upon what is said about paralysing the muscles by tight bandages, nor upon the power of the body to accommodate itself, by a very painful discipline, to very distressing necessities.

The importance of the position of the hand in the treatment of fractures of the radius has been fully recognized for a long time by eminent surgeons. In these cases, Mr. Cline did not allow the splints or the sling to extend below the wrist. His object was to let the hand, by its own weight, and without any impediment, incline towards the ulnar edge of the forearm; and, while the ulna acted as a counter-extending force, this inclination of the hand would prevent the fragments from overriding or overlapping each other, and make it very easy to keep them

in apposition. He understood well the mechanism of this accident. When the radius alone is broken, the ulna affords all requisite counter-extension; and in proportion as the hand is inclined towards the ulna, will the lower fragments be drawn down, so that there will be hardly a chance for one fragment to overlap the other; certainly there will be little difficulty in keeping the fragments in apposition with very gentle means. But Mr. Cline's method of dressing, in order to accomplish the indication, was too indeterminate; he could not depend upon maintaining steadily the same degree of inclination of the hand, and one might suppose that there would be danger of producing artificial joints. Nevertheless, I am persuaded that, with Mr. Cline's method of treatment with short splints, there would be fewer cases terminating in deformity and loss of the use of the hand, than when the arm and hand are tightly swathed in long straight splints.

Sir Charles Bell long ago inculcated the importance of the inclination of the hand in the treatment of fractures of the forearm, and he has given a plate illustrating his opinion. Boyer is very explicit upon this point. He says, "the extension should be made by inclining the hand towards the ulnar edge of the forearm." Yet this obvious principle and this explicit direction are wholly disregarded in the present usual mode of dressing with long straight splints and tight bandages. Dupuytren, whose lectures on this subject should be studied by every surgeon, devised a splint—his *attelle cubitale*—with the special object of maintaining this inclination of the hand towards the ulna. Notwithstanding this great man devoted such deep attention to this subject, there were serious defects in his apparatus, which have been pointed out by subsequent French writers.

I have attempted to devise a mode of dressing these fractures, having reference to the principles advanced in this paper, and that will meet the following indications:—

1. To maintain such an inclination of the hand upon the forearm as shall most effectually relieve the muscles from tension, or put them in repose.

2. To maintain the hand and fingers in a position that, if rigidity should result, the member shall be as little an incumbrance, and retain as many of its uses, as possible.

3. To make it easy of application, requiring no extraor-

dinary skill or dexterity, and little liable to be deranged or displaced.

4. To make the dressing easy and comfortable to the patient, while it does not lack efficiency.

My own experience of its use, within the last three years, convinces me that I have to some extent accomplished these indications. How far this shall be corroborated by others can be known only when others shall have had time, opportunity, and disposition to test it.

To enable others to test the principles herein maintained, in the mode of treating these fractures, I offer the following directions for preparing the dressing, with some explanations as to its application :—

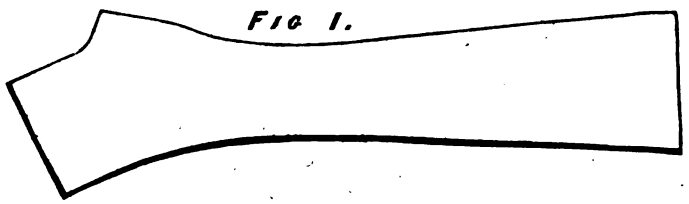


Fig. 1. A board cut to correspond with the profile of the forearm and hand.

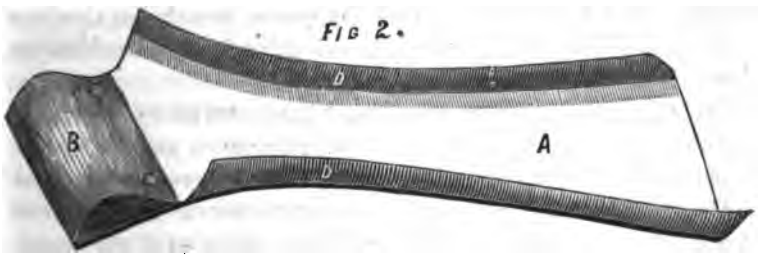


Fig. 2. *A*. This whole space down to the *palmar block* (*B*) to be covered with pasteboard. *C*. *C*. Parts of the block, which must be more or less cut away, to suit the prominences of the hand. *D*. *D*. The projecting and elevated edges of the pasteboard.

1. With a light board, of proper thickness for a splint, take a profile of the well forearm and hand of the patient, placing the hand in its habitual inclination towards the ulnar side of the arm, and extending the profile from the elbow downwards, so that it shall reach the second joint of the fingers on the inside, when these are moderately flexed—as much flexed as they are when the points of the thumb and fingers are brought into contact. The lower end of the board must be cut off obliquely (at

an angle of fifteen or eighteen degrees) in a direction corresponding with that of a body grasped in the hand, when the hand is inclined to the ulna, as above indicated.

2. Cover the board thus prepared with sheeting, or other strong fabric. This may be done by winding around it, from end to end, a narrow rolling bandage, covering all of it as nearly as may be, with few or no duplications. This is the most expeditious method. A neater one is to cut a piece of sheeting, of the general form of the board, but extending beyond the board on every side, and fastening it upon the board either by a few stitches, drawing towards each other the overlapping edges, or gluing down those edges upon that side of the board which is to be towards the arm, and which edges are to be covered with the pasteboard.

3. Prepare a block of soft, light wood, from seven-eighths to eleven-eighths of an inch thick, and from two to two and a half inches wide, according to the size of the patient's hand, and of a length corresponding with the width of the board in the palm of the hand. This block is to be carved and rounded, so as to adapt it to the form of the hand, and make it easy for the thumb, and in the grasp of the hand when it is placed on the board. It is to be fastened there by screws or nails, so that the remote edge of it shall correspond exactly with the lower oblique end of the board.

4. Upon that part of the board not covered by the palm-block, fasten, by means of small carpet tacks, a piece of book-binder's pasteboard, extending on each side beyond the edges of the board about an inch. If the pasteboard be very thick and stiff, make a slight incision in it along the edge of the board, in order to bend more easily the two projecting portions of it, thereby making a kind of box for the lodgment of the arm.

It seems to me that this splint, or one constructed on the same principles, will meet the above-mentioned indications in the following manner: *First.* The form given to the board retains the hand in its habitual inclination towards the ulnar edge of the arm, accomplishing the object aimed at by Dupuytren's *attelle cubitale*, with as much certainty, with more simplicity, and more comfort to the patient. *Second.* The palmar block retains the hand in its habitual inclination backwards, and it gives the fingers that moderate flexion which most relieves the muscles

from tension, and likewise that position which, if stiffness should result, will not only save the hand from a most inconvenient, ungraceful deformity, but will reserve to it the power of performing very many of its most frequent and useful functions. In addition to these advantages, this block contributes much to the comfort of the patient. *Third.* The object in covering the board with a strong fabric, as above described, is to retain the bandage with certainty in its place, without applying it with a dangerous tightness; for, by fastening the roller to this covering with pins, the surgeon need never have his patience tried by finding his dressing deranged, at his next visit. I can speak with confidence on this point, from having used it repeatedly in cases where this quality was fully tested. *Fourth.* The pasteboard is not an essentially necessary part of the splint, but it will be found to contribute to the comfort of the patient and the convenience of the surgeon.

The requisites for dressing with this splint are flannel or other soft fabric, to cover or line the inside of the splint; two compresses; a roller; sometimes, but not always, a dorsal splint.

The flannel or other fabric with which the splint is lined should extend a little beyond the edges of the pasteboard, and the same piece may be extended over the palmar block; but it will be better to cover this block with a separate piece. For this purpose, take a piece of flannel large enough, when it is doubled, to cover the block. Through the doubled edge, with a proper needle, carry a small string (such as ligature-twine), and tie this around the splint immediately above the block. The covering of the block thus applied may be conveniently changed, without removing the arm from its bed.

Two compresses will generally be required: the anterior or palmar, and the posterior or dorsal. The proper construction and application of the former of these are a most important point in this dressing, and certainly not less so when long, straight splints are employed; and deformity of the radius or wrist will most frequently result from negligence or want of skill in its use. If the compress be deficient in thickness, and the bandage be applied with its usual tightness, there will not fail to be either a curvature forwards, or a sigmoid flexure, which are the usual deformities. If the thickness of this compress be excessive, there may be a curvature backwards, which I think seldom

occurs; but there will be such undue pressure by such a compress as to increase the danger of adhesions, and to aggravate the discomfort of the patient.

I consider this point so important that I shall run the risk of being thought tediously minute.

It has seemed to me a notable defect in Dr. Barton's mode prescribed for dressing this fracture with straight splints, that he directs the two compresses to be of equal dimensions, and of about the same dimensions in every case. He says, "Two compresses, each about two inches square, and composed of strips of bandage about one yard and a half long, evenly folded up, are to be in readiness." Dr. Barton's very eminent skill would undoubtedly vary from this direction, as each case might require. But we object to this as a rule for those who follow rules implicitly.

If we apply a long, straight splint to the palmar side of several uninjured forearms, we shall find the space between the splint and that part of the forearm, to which the compress is usually applied, to vary very much, being two or three times as great in some cases as others. This space will depend upon the form of the bones of the forearm (which are sometimes considerably curved backwards), upon its muscularity or emaciation, and upon the greater or less prominence of the heel of the hand. This anterior compress must, therefore, vary in thickness, according to the varying form of the forearm and hand.

In order to determine with precision the requisite thickness of this compress in any case, place a long, straight splint upon the palmar side of the uninjured forearm of the patient, and make a compress of such thickness as to fill the space, so that the splint applied shall bear as firmly upon the compress as the ends of it do upon the wrist and upper part of the forearm. It is to be observed that, when the hand has its usual inclination backwards, the space between the forearm and splint will be less, and of course require a compress of less thickness, than when the hand and forearm are swathed upon a long, straight splint.

With the splint here presented to the College, it is wholly unnecessary to attach this compress to the forearm by means of a roller. And where there is not such a necessity, it is generally worse than useless to apply a roller directly to the arm

before the splint is applied. Some eminent surgeon has said, that the only advantage is, that it impresses bystanders with an idea of the complexity and difficulty of the operation. If excoriation should be threatened, cover the part with soap plaster. Place this anterior compress on the splint, so that its lower edge shall approach very near to the lower end of the upper fragment of the radius, when the forearm is laid upon the compress in the splint.

These preparations being made, the fragments, if deranged, are to be reduced, and the splint applied. I have very seldom, if ever, found any difficulty in replacing the fragments. Let an assistant, grasping the hand (not the fingers), incline it towards the ulnar side of the arm, according to the direction of Boyer, making steady, but not very vigorous tension, and with his thumbs and fingers the surgeon will easily press the projecting fragments into their proper relation to each other. In making this extension, Dr. Dorsay directs the assistant to "grasp the hand." Dr. Barton says an assistant "makes extension from the fingers." It seems to me that Dr. Barton errs on this point. The objections are, first, that by grasping and pulling the fingers, the flexor muscles are brought into so much more tension, that they will offer more resistance to the extending force. In the next place, by pulling at the fingers the hand will be brought more nearly into a direct line with the forearm, instead of being inclined towards the ulna, the utility of which inclination in such cases is, I think, so obvious that it would be superfluous to cite authority or to attempt a demonstration.

After the forearm is laid into the splint, apply the dorsal compress. This compress is seldom essentially necessary in these cases, but it may always be advisable to use it. Its thickness is comparatively unimportant, especially when a dorsal splint is not employed. It may be made of folds of a bandage of about the width of the wrist, and so long as to cover the lower fragment of the radius and the wrist, but not extend upon the hand. After adjusting this compress, apply a roller, beginning upon the lower fragment of the radius, carrying it down over the wrist, the metacarpus, and the first joints of the fingers, leaving the thumb free; then returning with the bandage to the upper end of the splint, and attaching it in several places by pins to the woven covering of the splint. If the compresses

have been properly made and adjusted, it is unnecessary, with this splint, to apply the bandage with anything like the tension ordinarily employed in dressings with the long straight splints; and those accustomed to the use of these splints will be liable to err on this point.

A dorsal splint is unnecessary, unless the fracture occur so high up that there is danger of diminishing the interosseous space between the bones of the forearm. In such a case, it is necessary. It should be so wide that the bandage will not pass upon the fragments in such a manner as to lessen the interosseous space; and it should be so long as to reach from near the elbow to the hand, but not extend upon the metacarpus.

It may sometimes be necessary to use longitudinal narrow compresses to prevent the contraction of the interosseous space. But where no roller is applied directly upon the arm, it is probable that these long narrow compresses will not commonly be found necessary.

Although the preceding observations have had an especial reference to fractures of the lower end of the radius, probably some of the principles advanced and the means proposed to carry them out, may be extended farther. How far they may be applicable to other injuries or diseases of the forearm and hand, I leave to be determined by future observation.

Dr. COATES remarked that he had had, at one period of his life, as was well known to several gentlemen now present, a very large experience in injuries of this kind. He, therefore, felt no hesitation in expressing his opinion, although gentlemen were in the meeting who, at the current time, were in the habit of attending to a much larger number than himself.

The discussion of the relative treatment of fractures by long and short splints, had been the work of a former age. The present habit of using splints extending beyond the ends of the fingers owed its origin, in Philadelphia at least, to the influence of Drs. Physick, Parrish, and Hartshorne.

Dr. Physick, then professor of surgery, could not be justly blamed for not going largely or frequently into the history of surgery. This was an inevitable result of the habits of our country and the age, and of the regulations of our institutions; which left him insufficient time. His turn of mind was emi-

nently explicit and practical; inclining him to employ the time and opportunities afforded him by his official station in communicating to students clear and sound rules, likely to be useful to them in their future duties. He was also influenced, by the genius of John Hunter, to brevity in teaching, and simple rules in practice.

Without deciding in favor of short splints, Dr. Coates believed that great weight was due, in treating a case, to some of the considerations stated by Dr. Bond. He did not, however, so much believe that either of these methods was decidedly and generally superior to the other, as that success and the greatest usefulness in treating fractures of the forearm depended on a thorough knowledge of them all, and of their relative merits, and on a just discrimination in selecting, combining, and alternating them.

He did not doubt that it was desirable in itself to keep the flexor and extensor muscles half relaxed. It was difficult to prevent bending of the hands in treating fractures with long splints; the spaces to be filled up by compresses were so large, and the action of the fingers so easy and habitual. Dr. C. had frequently, and indeed generally, of late, treated these fractures by one long and one short splint. There was no doubt that serious evils had been produced by a too long continuance of application, and a too tight pressure of the splints. The inflammatory or inflammation-like action around the fracture, and necessary to the cure, extended itself to the ligaments and to the insertions of tendons, in the vicinity, and caused thickening and stiffening. The wrist joint was a frequent sufferer in this way, and in middle or advanced life more or less injury was frequently incurable. Recoveries from stiffness produced by this agency were more common in early youth.

Dr. C. related a case of a young man of nineteen, in whom the stiffness was such as to deprive him entirely of all useful motion of his hand and fingers. The surgeon, after five weeks' treatment, ordered pressure to be made for two weeks more, in such a manner as to distend the interosseal ligament; from a belief, which Dr. C. did not share with him, that the stiffness arose from an approximation of the radius and ulna, at the place of fracture, by the circular bandage, against which Dr. Physick had cautioned us in his lectures. Pressure was made, as directed,

by longitudinal, graduated compresses, acting between the bones; but without any improvement. The patient was then subjected to a long course of frictions, liniments, mechanical movements, electricity, and blisters; but all without the slightest improvement. The young man went to sea, and was seen by Dr. Coates, one year afterwards, to the great astonishment and pleasure of the latter, entirely restored. He had then recovered the minutest and most extensive movements of the hand, thumb, and each separate finger; every joint being subjected by Dr. C. to trial in every direction. The patient ascribed his recovery exclusively to persevering efforts to perform the natural motions during that interval. Dr. C. believed this a very rare case.

He apprehended that there was, in general, an advantage in applying the long splint on the back, and not the anterior surface of the forearm. The spaces to be covered by compresses were here much nearer to a plane, and the support, consequently, much steadier. There was not much to provide for by compresses on the back of the arm, further than to fill the slight vacuity produced by the natural projection, in the palmar direction, of the hand from the arm, and to protect the limb from the hardness of the splint. To this ought to be added, the compress necessary to keep the lower end of the radius reduced, in the fracture of the lower end, with displacement upwards and backwards, known as "Dr. Barton's fracture;" which he had known to do mischief. On the anterior side, the vacuity above the wrist was large, irregular, and variable; the radius and carpus here really forming an arch, and the ulna being liable to deceive in this respect; the whole requiring a difficult and delicate mechanical adjustment. No difficulty was really experienced in the back of the arm, other than from the little prominence of bone which separates the extensor tendons. The splint may, without the least inconvenience, extend beyond the corresponding condyle of the os humeri; while, on the anterior and inner side, this is impossible to be done well, and will only entail suffering, delay, and the risk of deformity and lameness in the patient; and trouble, disappointment, and regret in the practitioner. A short splint was used by Dr. C. on the anterior side, to provide, together with proper compresses, for preserving the due extension of the interosseal ligament. The natural fitting

of the hollow of the forearm to the rotundity of the thorax was, independently of this, rather an advantage than an inconvenience.

Another source of superiority in the use of a long external splint, was that it furnished a shield for the limb against those accidental shocks which, in a healthy condition of the parts, we do not notice or we forget, but which are known, and observed to be numerous, when received on a part wounded or inflamed. A patient with a fractured arm ought, unless in the case of acute inflammation, to walk about, and obtain the fresh air. His fracture will visibly make more rapid approaches towards cure for this means of preserving and regenerating the formative forces. It is also well known to all who have watched such cases, either in their own persons or in those of others, how much the subjects of them are exposed to slight and repeated concussions.

Dr. LITTELL presented the following

CONSIDERATIONS ON THE ETIOLOGY OF SCARLET FEVER, SMALLPOX, AND OTHER DISEASES.

Few diseases have given rise to more discussion than Scarlet Fever, and there are few on the nature, causes, and treatment of which, greater diversity of sentiment still prevails. The mind of the profession, unsatisfied with the existing state of our knowledge, and, in the laudable desire to lessen the sum of human suffering,

> "Impelled with steps unceasing to pursue
> Some fleeting good that mocks it with the view,"

is in danger of casting off principles which, however defective, have hitherto afforded some degree of steadiness to practice; and of becoming, in the absence of any friendly beacon, the sport of a blind and aimless empiricism. In the hope of contributing my mite to the elucidation of this difficult subject, I submit with diffidence the few remarks that follow, trusting that, though they may fail to produce conviction, they will yet be received with the indulgence usually accorded to good intentions.

The opinions most generally entertained respecting scarlet fever are, that it arises either from a specific contagion, or the introduction into the system of some other poisonous or morbific

matter; the cause in both cases operating by depraving the blood, and producing, together with the eruption, the various local inflammations and congestions which are so frequently met with in its progress. The first hypothesis, however, fails to account not only for the epidemic prevalence of the disease, but also for the occurrence of sporadic cases, where there has been no exposure to any contagious influence; so that even if it were admitted that in some of its severer grades it might be propagated by contagion—of which doubts have been entertained by many judicious practitioners—we should still be removed as far as ever from any rational explanation of its original production. The cause operating in the individual first affected, and in all others between whom and such individual no communication, direct or indirect, can be traced, must evidently be something different from contagion. With regard to the alternative supposition—the introduction into the system of some poisonous or morbific matter other than contagion—it may be observed, in the first place, that we have no proof of its existence; secondly, that it involves the supposition of a distinct miasm for every exanthem; and, thirdly, that the phenomena of the disease can be more satisfactorily explained without resorting to such hypothesis, and it is unphilosophical to multiply agencies for the causation of the same result.

I have thought that this explanation might perhaps be found in the influence, under some of its modifications, of electricity on the animal economy.

The electric fluid is the grand agent in the production of most of the phenomena of nature. In her inorganic domain, its supremacy is universally acknowledged. It is seen alike in the "vast and the minute;" on the one hand, disintegrating mountains, and monuments of art, and constituting, with the auxiliary influences which it calls into operation, the "Voice of Time," which the pilgrim, amid the ruins of antiquity, "hears aghast, disparting towers;" and on the other, presiding, as the cause of all chemical change, over processes the most recondite and mysterious. In the vegetable kingdom, it performs a still more vital and important function, not only producing, in connection with the other imponderable agencies of light and heat—if, indeed, they be not all modifications of the same principle—conditions favorable to the germination and growth of plants,

but quickening them into activity, and thus becoming the efficient cause of their development. Over the various orders of sentient existence it exerts an influence, of the extent of which we are only just beginning to be conscious, though its analogy, if not its identity, with the nervous energy, was long ago satisfactorily demonstrated. Its action upon the human system, indeed, is the subject of common observation. We have all experienced the feeling of vigor and elasticity which it imparts, when present in due proportion in the atmosphere, as in clear, cold weather; and more strongly still, the sensations of chilliness and discomfort occasioned by its deficiency under opposite circumstances. Rheumatic persons, and those who have recently suffered from sprained or fractured limbs, can predict, with unerring certainty, an approaching atmospheric change, though there may be no sensible indications of its occurrence; and the evening exacerbations which we observe in fevers and other complaints, are probably owing to the same cause—the system, in its disturbed or debilitated condition, being unable to bear, without suffering, electrical changes which would have little or no perceptible effect in a state of health. It is these changes, moreover, consequent on the withdrawal of the sun's rays, precipitating the dew, and thereby increasing the conducting power of the atmosphere, which renders exposure at this period so dangerous in certain seasons; and not, as has been stated, the greater prevalence in the air of miasmatic exhalations. The common expression of "taking cold," which is supposed to account so satisfactorily for many of the complaints to which "flesh is heir," may be adduced as another example of such influence. This is owing, not to variations of temperature, as generally believed, but to changes in the electrical condition of the atmosphere, of which these variations are effects or accompaniments. It is not unusual for individuals to retire in apparent health to rest, in a comfortable room and bed, and to awaken, some hours after, with a sore throat, or a paroxysm of croup; and we have all known persons to be attacked with these and other diseases said to arise from "cold," who have been closely confined for days or weeks to apartments, the air of which has been maintained at one unvarying temperature. It is worthy of remark, that these pathological effects are chiefly produced in the ele-

mental changes which precede a storm, and less frequently during its continuance: when the rain or snow begins to fall, the equilibrium is restored, and, if the vascular system has not been involved, uncomfortable sensations subside.

I mention these occurrences of familiar observation, to show that there is nothing improbable in the hypothesis that, under circumstances of predisposing or concomitant influence, general or individual, pathological phenomena of far greater gravity, variety, and extent, may be occasioned by the exhaustion of sensorial energy through changes in the distribution of the electrical fluid; and that the exhaustion thus induced may be the chief agency not only in the production of scarlatina, smallpox, measles, and some of the other exanthemata, but also of several forms of fever, of rheumatism, the idiopathic phlegmasiæ, influenza, cholera, &c. &c.

Among the predisposing influences to which allusion has been made, the diminished light and heat caused by the sun's southern declination should not be entirely overlooked. If this diminution be sufficient to suspend vegetable life, and convert the fair beauty of earth into the decay and gloom of winter, it is surely no unreasonable conjecture that it may exert an injurious impression on animal existence also, and more particularly on the feeble and infantile portion of our race.

To return to the consideration of scarlet fever. This disease, though occasionally observed in all seasons of the year, prevails most extensively from October to April, or May; a period when electrical changes are most frequent, and their action promoted by cold and other obvious circumstances; and is chiefly confined to children, whose power of resistance to hurtful impressions is less than in persons of maturer age and vigor. The action of the brain being depressed or otherwise disturbed by the rapid abstraction of sensorial energy, its control over the capillaries is lessened or suspended; they consequently become dilated, the circulation through them is retarded, and a state of things is induced closely bordering on inflammation. This is more particularly observed in the mucous membrane of the digestive system, and in the skin; as evinced in the former, by the redness of the throat and the projecting papillæ of the tongue; and, in the latter, by the scarlet efflorescence and other symptoms of increased action; the predominance of which in

this tissue generally indicates a mild form of the complaint. Meanwhile the brain, reacting against the morbific agency, secretes and transmits the nervous energy as before; but there is now occasion for a greater supply in order to secure the restoration of the impaired tonicity of the capillaries. This is accomplished through the exaltation of its functions, produced by the febrile movement; and, after a commotion of greater or less severity, occupying necessarily a nearly definite period, the system reverts to a state of health. Such is the course of things in scarlatina simplex. In the anginous variety, the pathological alterations proceed one step further. The circulation through a portion of the capillaries is arrested, accumulation follows, and inflammation is set up in the fauces—the point of reflection on the skin—where, from the laxity of the tissues and the exposed condition of the capillaries, we should naturally expect to find it. In a still more aggravated grade of the malady, whether owing to the intensity of the cause, the feeble state of the constitution, or some other circumstance affecting the individual, the powers of life are prostrated, in many cases, beyond the capability of reaction; delirium and coma ensue, congestion takes place in the larger vessels, and, after a struggle of varying duration, death generally closes the scene; sometimes supervening in very few hours.

The production of smallpox and measles when prevailing epidemically, or in sporadic cases where there has been no exposure to contagion, I would explain through the same instrumentality; the difference being, that in scarlatina the morbific influence exhausts its force chiefly on the capillary *circulation* of the two great surfaces mentioned; and in variola and measles, while it implicates—more particularly in the latter—the pulmonary, rather than the gastric, mucous tissue, it receives, from some predisposing causes,* a determination to different departments of the *secretory* apparatus of the skin, and from the elaboration which there takes place, derives its specific and contagious character. In smallpox it may not improbably be the

* Where this predisposition does not exist, the contagion, even of smallpox, will not always produce the eruption. I have seen cases of fatal congestive fever, manifestly caused by attendance on confluent cases of that malady.

sebaceous follicles, and in rubeola the exhalants which are thus affected.*

It is no sufficient objection to this hypothesis that these are diseases which pursue a definite course, and, for the most part, affect an individual once only during his life. There must be, in every inflammatory disturbance, a period of increase, prevalence, and decline; and these stages will necessarily occupy, with such variations as are occasioned by its intensity, nearly the same length of time under all circumstances. Scarlet fever exhibits, in this respect, as also in the protection which it affords, the greatest latitude.† In variola, the inflammation, terminating in suppuration, is protracted to a longer period, and the whole course of the disease is more unvarying.

The insusceptibility of the system to a second attack of these complaints is confessedly a subject of curious speculation; but the difficulty is not confined to them; we find the same immunity, though not perhaps in equal degree, in yellow fever, typhoid fever, whooping-cough, and several other affections. The exanthemata prevail chiefly in early life, when the nervous system is predominant and impressible; and the more confirmed and vigorous action of the brain in maturer years, enabling it to resist noxious agencies with greater impunity, has, no doubt, a large share in producing this exemption. In children, moreover, there is, from the greater vascularity of the mucous and dermoid tissues, a natural tendency to affections of these parts; while, in adult age, owing to the development of latent imperfection, or to accidental causes, the predisposition is rather to disease of the contents of the great splanchnic cavities: but, whatever the rationale may be, the final cause is abundantly evident in the merciful provision thus made against the extermination of the species.

The vitiated condition of the blood which occurs during the progress of these complaints, and has been commonly attributed to the introduction of some poisonous or morbific matter, may likewise be explained, with greater probability, on the theory

* Another proof of the common origin of these complaints is their prevalence at the same time, and the occasional co-existence of two or more of them in the same person or family.

† Repeated attacks of scarlet fever are of frequent occurrence, generally lessening in severity as the individual advances in years.

which I have proposed. This fluid derives its vitality from the nervous influence to which it is constantly subjected, especially in its circulation through the smaller vessels; and the diminution or suspension of innervation would occasion a deterioration of its properties, which defective arterialization, imperfect elimination, and the absorption of morbid secretions, would still further impair.

The application of the same mode of reasoning to the production of the phlegmasiæ is sufficiently obvious. An individual, from exposure in a raw and damp condition of the atmosphere—the physical powers being perhaps depressed by fatigue, or some other predisposing cause—becomes indisposed, and is said, in common language, to have taken "cold." In other words, the sensorial energy has been abstracted from the system more rapidly than it could be generated without disturbance of the cerebral functions; the effect is felt in the diminished innervation of some organ liable from congenital or acquired predisposition to fall into diseased action, and, as a consequence, inflammation takes place, either in its parenchyma or investing membrane, as circumstances may determine.

It is unnecessary to trace the *modus operandi* of the principle through all the applications of which it is susceptible; for, if what has been already advanced should be deemed unfounded, it would be time misemployed to pursue the investigation. But I may be allowed to express the hope, that the similarity, in some of its features, of the view which has been taken, to the Cullenian doctrine of collapse and reaction, will not operate to its disparagement. When the question is, "What is Truth?" it is unworthy of science to suffer prejudice either to preclude inquiry or to bias the judgment.

The meteorological constitution of one part of the year, besides giving rise to complaints which appertain more particularly to it, will likewise influence, in a greater or less degree, the nosological character of the following season. A hot and dry summer, for example, will not only be distinguished by the prevalence of dysentery, diarrhœa, cholera, and other affections of the alimentary canal, but will also create a predisposition to fevers of a typhoid nature; and these may exist cotemporaneously with smallpox, measles, varicella, &c., which observation proves most to abound in the open, wet, and variable weather

of Autumn. In such weather, moreover, it may be remarked that these diseases assume more of an asthenic tendency than they evince under a dry, cold, and steady condition of the atmosphere.* To those, therefore, who consider the complicated organism of the animal economy, it will not appear surprising that results apparently so different, and yet in reality essentially similar, should be produced through the agency of a single principle, assisted in its operation by predispositions engendered by a multitude of causes, existing in countless combinations, and involving whole communities, or affecting individuals only.

The doctrines commonly taught on this subject having always been, to my mind, very unsatisfactory, I have been led to seek for a more rational solution of the problem, and this inquiry has conducted me to electricity as an agent which, in its excess or deficiency, exerts an influence far more important in the production of pathological phenomena than is generally believed. The reasons for this hypothesis may appear to others less conclusive than they do to me; but if I have succeeded in raising a presumption of its probability, and thus of securing for it the consideration of this learned body, I shall have accomplished the object of this brief paper.

> ——"Si quid novisti rectius istis
> Candidus imperti; si non, his utere mecum."

The whole subject of epidemical influences requires re-investigation by the light of modern science, and reconstruction on a basis of more accurate observation and severe deduction.† Assertions, difficult either to verify or disprove, have been too implicitly received on the authority of others, though their inconsistency with facts of daily occurrence can hardly have escaped the attention of the intelligent and reflecting. It is, perhaps, presuming too much to expect from this humble essay any considerable influence in suggesting doubt, or awakening inquiry; but it was a duty not to withhold the expression of opinions, how

* A change from one state of atmosphere to the other, if steadily maintained, is generally followed by a corresponding change of type.

† The same remark may be made in reference to the value of vaccination, which, notwithstanding the abatement it has undergone, it is almost accounted heresy to deny. The writer regrets that he cannot share in the confidence entertained by his brethren on this subject.

different soever from those which are commonly received. To me it has appeared more philosophical, more in accordance with the operations of the DIVINE AUTHOR of nature, who produces effects the most diverse and wonderful through the agency of a few simple elements, thus to ascribe the causation of the diseases which we have been considering to a single instrumentality, analogous to the nervous energy, and capable, from its potent and all-pervading nature, of accomplishing, through the governing organ of the animal economy, all that is attributed to it, rather than, like the heathen of the olden time, to create a deity for every object, and people the invisible realms of medicine with as many miasms and morbific influences as there are maladies incident to the human frame.

In regard to practice, I can add little to what is already known; but the view which has been suggested of the etiology and nature of scarlatina may tend, by divesting the disease of the mystery which has enshrouded it, to impart steadiness and confidence in the application of that knowledge. We have no contagious or morbific matter to eliminate from the system; and due regard being had to the depressing nature of the cause, and the general character of the complaint as affecting more or less all the tissues, the principles which should govern us in its treatment are the same as those which regulate our practice in other febrile affections.* The reaction tends spontaneously to subside, and may be regarded as in itself a recuperative effort designed to restore the impaired innervation of the capillaries. The chief indications, therefore, are, to moderate the excitement when in excess; to guard the integrity of important organs when threatened; and to promote, as far as practicable, the comfort of the patient. In mild cases, little interference of any kind is required, though an occasional foot-bath and some gentle diaphoretic may be appropriately prescribed. When the movement is more actively febrile, the citrate of potash with spirits of nitre and antimonial wine, cooling beverages, and sponging the surface with cold water, to which a little alcohol has been

* It is important to the due care of the sick to abate the fear of contagion, which has unhappily taken such hold of the public mind. In its milder forms, I am convinced that the disease is not propagated in this manner, whatever may be the case in some of its more protracted and malignant manifestations.

added, will probably be sufficient to restrain the excitement within due bounds. Frictions with lard alone, or with a liniment composed of lard well incorporated with lead and rose-water, will also exert a beneficial effect in allaying the itching and irritation of the skin, which in children is often a very troublesome symptom. In the anginose variety, gargles containing the chloride of soda are useful in removing the offensive odor of the breath, and those of lemonade, sharpened with the infusion or tincture of capsicum, in supporting the tone of the inflamed vessels. The chloride of soda and kindred preparations, from their agency in neutralizing the free acid generally present in morbid secretions from the mucous membranes, and thereby diminishing their irritating properties, have been thought to produce also good effects by their internal administration. Aperients are often indicated in the progress of the disease; but these, more especially in the little patients who are usually the subjects of our treatment, should be of the mildest character. Venesection is rarely demanded for mere general excitement, and should only be performed in circumstances of manifest necessity, as, for instance, the preservation of some important organ, in which inflammation is either about to occur, or has already taken place. The nature of the disease, it is true, is inflammatory; but there is either no local affection to maintain prolonged and steady reaction, or such affection, when it exists, is modified by the general disorder, and the complaint consequently tends rapidly to exhaustion, particularly in the open and variable climate of our country. Topical depletion, though sometimes properly prescribed in the early stages for the relief of urgent symptoms, is seldom productive of all the benefit that is anticipated from it; but in some of the sequelæ of the malady it is often an important remedy, and may without incompatibility be practiced concurrently with measures adapted to sustain the general strength, when these are deemed necessary.

In the congestive forms of scarlet fever, the best directed treatment is too often unavailing. But such means as support the action of the capillaries, and excite the energy of the brain, give promise of some utility; the warm bath and stimulating frictions are among those best fitted for this purpose.

Dropsical effusions sometimes take place suddenly when all

danger is apparently over, and it will be prudent, therefore, to anticipate the evil by maintaining the renal secretion in full activity. In my own experience, this result has generally occurred in feeble constitutions, or in debilitated states of the system, forbidding depletion other than that produced by the action of saline and gently stimulating diuretics.

In accordance with the hypothesis which has been suggested, any means tending to sustain the action of the brain would be likely to prove to some extent serviceable as a prophylactic, and belladonna, opium, and other nervous stimulants or narcotics, might, in this view, be rationally prescribed. I have, however, never employed them; for, besides that it has appeared to me unreasonable to subject a whole community to treatment for an indefinite period, in the uncertain hope of protecting them from a disease that might not fall upon one person in a hundred, the grounds on which belladonna more particularly has been recommended are altogether too hypothetical, fanciful, and absurd to merit attention. The best preventive will probably be found in the use of appropriate clothing, especially of flannel as a non-conductor; the avoidance of exposure in chilly weather; and of exhaustion from any cause whatsoever; together with the employment of all such measures as may tend to promote a vigorous condition of health.

Dr. Wood called the attention of the College to the diminished percentage of deaths from consumption in the city of Philadelphia and the surrounding districts, as shown by the tables of mortality recently presented to the College by Dr. Ruschenberger, and published in the last number of its Summary of Transactions. Dr. Wood was inclined to attribute this diminution in the deaths from consumption mainly to the general use of cod-liver oil by individuals threatened with that disease, or in whom its premonitory symptoms had already exhibited themselves. We know of no other general influence to which the diminished mortality could be referred. He remarked, however, that it would be too soon to congratulate ourselves upon having discovered a means by which the fatality of consumption can be effectually and permanently controlled. It is an acknowledged fact, that the cod-liver oil has the power, in some instances, of arresting the progress of tuberculization without

entirely eradicating the predisposition to it; consequently, the diminution in the deaths from consumption of the past year may be made up in an increased mortality from this source, exhibited in the mortuary tables of some later period.

Dr. EVANS remarked, that the epidemic excitement in favor of cod-liver oil, as a remedy for consumption, commenced in the Eastern States some years since: hence, before we can arrive at any positive conclusion as to how far the diminution in the deaths from consumption, exhibited by the tables of mortality for our own city, is to be attributed to the curative powers of cod-liver oil, we must ascertain whether the same diminution has been noticed in Boston and New York, where the oil has been used certainly to as great an extent, and for a longer period, than it has in Philadelphia. Judging from his own experience as to the influence of the cod-liver oil in the arrest of tubercular phthisis, he certainly could not endorse the favorable opinion as to its efficacy that is entertained by some practitioners.

Dr. COATES remarked that he had seen, as others had, far more advantages result to persons suffering under consumption, from the use of cod-liver oil, than from any other medication of the very numerous list which he had tried or seen tried.

In reply to Dr. Evans, Dr. Coates said, that he knew no facts in relation to diminution of the mortality in Boston by consumption during the last four or five years, and since the introduction to use of cod-liver oil; but during the last ten years, the diminution was very conspicuous. For this he referred to statistical tables. He was quite aware that much of this was to be attributed to improved comforts in living; particularly to the use of cellar furnaces, gum-elastic fabrics, abundant and cheap cotton flannels, and the occasional discharge of masses of snow from the streets into the harbor; and also to another, and perhaps still more important change, the gradual removal of the poor from the city of Boston proper, to the suburban cities which surround it; and the consequent great average increase of wealth possessed by the population which remained, enabling the latter to be composed of persons enjoying, all circumstances considered, a larger share of the comforts of life. Yet he believed that a part of it was really owing to cod-liver oil. The published

statement was, at all events, not *contradictory* to the principle established by Dr. Evans.

Dr. C. added that he had been informed that a part of the process of progressive removal which he had described, had retrograded, or gone beyond a crisis; part of Boston proper having been since relinquished to emigrants, from which occurrence new statistical facts might arise.

Dr. Coates thought that prolongation of life and strength, particularly an average prolongation, ought to be considered as necessarily involving a real increase of cures. No cure could be effected, in any disease, without the powers of nature. He believed that it was now a settled point in medicine, that tubercles of the lungs, though such a terrible destroyer of the human species, always made an attempt, or had a tendency, to cure; that death was produced by accumulation of disease, and by exhaustion of the powers of life; and that some recoveries really take place. If this be correct, all depends on the prolongation of existence, and the retention of the powers of the constitution. An average prolongation of life, and of a portion of the vital powers, could not, therefore, by the commonest rules, fail to add to the average and real number of *bonâ fide* recoveries.

Propositions (from 27 to 30 inclusive) for Fellowship were presented.

Stated meeting, January 6th, 1852.

Dr. Wood, President, in the chair.

Present sixteen members.

The Trustees of the Building Fund presented their annual report as follows:—

At the date of their report (January 1851), there remained uninvested, in the hands of their Treasurer, the sum of seventy-three dollars and forty cents ($73 40). Since that period, they have received contributions from individuals to the fund, through

the Treasurer of the College, amounting in all to thirteen hundred and ninety dollars ($1390 00), and interest on investments amounting to three hundred and nine dollars and eighty cents ($309 80), making together the sum of sixteen hundred ninety-nine dollars and eighty cents ($1699 80).

With cash received they have purchased the following securities :—viz.

Of the City five per cent. loan	$400, costing .	$375
" " "	200, " .	180 50
" six per cent. gas loan	1100, " .	1122 00
		1677 50

Their account will, then, stand as follows :—

Amount on hand in January last	$73 40
Whole receipts during the year 1851 . . .	1699 80
Making	1773 20
Whole of cash invested	1677 50
Leaving in the hands of their Treasurer . .	95 70

The whole of the securities now belonging to the Fund, including the additions made during the past year with their par value, are as follows :—

1. Schuylkill Nav. six per cent. convertible loan .	$850 00
2. Schuylkill Nav. Stock	51 00
3. Chesapeake and Delaware Canal loan . .	545 16
4. City six per cent. loan	1500 00
5. City five per cent. loan	2900 00
6. Spring Garden six per cent. loan . . .	1300 00
7. City six per cent. gas loan	1100 00
	8246 16

The estimated value of these securities, at the present market prices, which are somewhat lower than at this time last year, is about seven thousand four hundred dollars ($7,400).

(Signed) GEO. B. WOOD,
GEO. FOX,
JNO. RODMAN PAUL.

Dr. CONDIE presented the following table, showing the Statistics of Consumption for the last twenty-six years.

Years.	Total number of deaths.	Deaths from casualties and old age; still-born.	Absolute number of deaths from disease.	Deaths from consumption.	Percentage of deaths from consumption.	Deaths from epidemic cholera.
1826	4151	515	3636	587	16.	
1827	3945	503	3442	523	15.	
1828	4292	550	3742	581	15.5	
1829	4294	476	3816	638	15.71	
1830	4250	482	3768	636	16.87	
1831	4939	491	4448	673	15.15	
1832	6699	504	6195	681	10.99	948
1833	4440	570	3870	748	19.32	
1834	5462	647	4815	725	15.	
1835	5666	573	5093	717	14.	
1836	5357	574	4783	755	15.56	
1837	5202	614	4588	748	16.3	
1838	5462	647	4815	725	15.	
1839	5113	608	4505	708	15.71	
1840	4949	692	4257	777	18.25	
1841	5670	702	4968	809	16.26	
1842	5943	709	5234	774	14.78	
1843	5526	707	4819	743	15.41	
1844	5521	699	4822	799	16.56	
1845	6242	734	5508	834	15.14	
1846	6347	795	5552	828	14.9	
1847	7149		6752*	856	12.67	
1848	7727		7268*	955	13.15	
1849	9462	992	8470	922	10.88	1027
1850	8488	1026	7462	907	12.15	
1851	8841	816	8025	952	11.86	

By this table it will be seen that, during a period when the population of Philadelphia, within the bills of mortality, has more than doubled, the actual number of deaths from consumption have risen from about 600 to 950—the percentage of deaths from that disease, during the same period, having gradually decreased from over 15 to about 12. It will be perceived that the percentage from consumption was very small during the cholera years, 1832 and 1849. In 1833, the percentage from consumption became greatly increased; no such increase, however, took place in 1850.

A conversation ensued among the Fellows present on the prevailing epidemics.

* Less, only still-born.

On motion, it was Resolved, that an adjourned meeting be held on the evening of the 20th inst., when the balloting for the candidates proposed for Fellowship, up to this date, shall take place.

Proposition (31) for Fellowship was presented.

A SYSTEM

OF

OPERATIVE SURGERY:

BASED UPON THE PRACTICE OF

SURGEONS IN THE UNITED STATES:

AND COMPRISING A

BIBLIOGRAPHICAL INDEX AND HISTORICAL RECORD OF MANY OF THEIR OPERATIONS,

DURING A

PERIOD OF TWO HUNDRED YEARS.

BY

HENRY H. SMITH, M. D.,

SURGEON TO THE ST. JOSEPH'S HOSPITAL;
ASSISTANT LECTURER ON DEMONSTRATIVE SURGERY IN THE UNIVERSITY OF PENNSYLVANIA;
LECTURER ON THE PRINCIPLES AND PRACTICE OF SURGERY IN THE
PHILADELPHIA MEDICAL INSTITUTE, ETC.

ILLUSTRATED BY NUMEROUS STEEL PLATES.

Parts 1 and 2.

OPINIONS OF THE PRESS.

"The two parts embrace seventeen chapters, which are carefully and methodically written. . . . . We have scarcely yet done more than examine the general character of the volume, but such examination has convinced us that it is a book alike creditable to the author and the country. It is truly an American book, and as such we are glad to receive it."

Boston Med. and Surg. Journ., Dec. 3, 1851.

"It would be hard to imagine a title more attractive to the practitioners and students of this country than the one which Dr. Smith presents. Operative Surgery, so notoriously popular a theme with nearly all who are engaged in medical pursuits, is here offered in a guise and under a prestige which are admirably calculated to interest the feelings and meet the actual wants of the whole American profession. The beauty and extent of the illustrations with which, notwithstanding its convenient size, form, and moderate cost, the author and his publishers have managed to enrich their offering, would amply suffice to command attention and place it in the front rank of standard publications. But we must not regard the volume as a manual of operations only. The bibliographical index is a treasure in itself and a monument of the compiler's industry, which must win for him the gratitude and esteem of every medical inquirer. . . . .

We shall look with great pleasure for the concluding portion of the work. . . . . Meanwhile the author, publisher and artist will accept our thanks in behalf of all who take any interest in our opinion of the enterprise for the very handsome manner in which it has thus far been carried out. No American practitioner should neglect to provide himself with an early copy for his table, not only as an instructor that may often prove a friend in need, but as a noble evidence of better times in prospect for the home teachers of the *lex scripta* of his art."—*Med. Examiner*, Dec. 1851.

"Want of space and of time consequent upon the recentness of its appearance precludes anything like an extended notice of this volume at present: and moreover, in justice to Dr. Smith and to ourselves, we prefer not to enter into a critical examination of his labors until they shall have been completed. Our impression of it, so far as we have examined it, is certainly very favorable. The paper and type of the book are much superior to most of our medical publications. The drawings, which are very numerous and well chosen, are chiefly copied from the beautifully executed plates of Bernard and Huette; many are faithfully drawn from nature: they are a great ornament to the book, and cannot fail to be serviceable to the operator."—*Am. Journ. Med. Sciences*, Jan. 1852.

"Messrs. Lippincott, Grambo & Co. of Philadelphia have issued from their press a new and invaluable work entitled 'A System of Operative Surgery,' &c. . . . . Two numbers or parts have been published, abounding with numerous steel plates, richly colored and finished throughout in the best style of the art. . . . We are sure the profession will welcome *this truly national work* in preference to being dependent, as we have too long been, upon reprints of foreign books in this department."

N. Y. Med. Gazette, Jan. 1852.

SUMMARY

OF THE

TRANSACTIONS OF THE

COLLEGE OF PHYSICIANS,

OF PHILADELPHIA.

FROM JANUARY 20, TO APRIL 6, 1852, INCLUSIVE.

Adjourned Meeting, January 20th, 1852.

Dr. Wood, President, in the chair.

Present, eighteen members.

Dr. Ellwood Wilson related the following case of

SUDDEN DEATH FROM ARTERIAL HEMORRHAGE WITHIN THE WALLS OF AN ABSCESS.

Having recently witnessed a case of abscess near the angle of the jaw in a woman of feeble health, in which I was only prevented from making an opening to discharge the contents of the abscess from the exhausted condition of the patient, and which terminated fatally from copious arterial hemorrhage, I have thought that a history of it might prove interesting to the College. On the 3d of December last I was called to see Mrs. W., aged 19. Pregnant seven months. Residing in south Seventh below Reed St. She was sitting up; complained of fever, *headache*, distressing itching from an eruption, and general weakness with loss of appetite.

She was jaundiced. Skin, nails, and conjunctiva being deeply tinged; pulse 130, feeble; tongue red and glossy; an eruption, which had appeared a few days previous to my visit, on the face and head, now covered the body and arms; it was of a bright red

color, in patches. The burning and itching were so great as to cause constant scratching; there were nausea and loss of appetite; the bowels were constipated. A large abscess, just at and under the angle of the inferior maxilla on the right side, was discharging copiously a thick, ill-conditioned pus, containing shreds of cellular tissue; the margin of the abscess was irregular, and it was excavated or hollow within.

I learned that about four weeks previously, while at market, she got thoroughly wet, and remained about two hours before she changed her clothing; to use her own language, she took a heavy cold, had daily, for several days, severe chills, with pain in the jaw and general indisposition; but, having recently had intermittent fever, the chills were attributed to a relapse. Her teeth were very much decayed; she was subject to attacks of face-ache with abscess of the gums, and she thought herself suffering from one of her usual attacks. She continued suffering for several days, with great swelling of the face and neck, and sore throat, stiffness of the jaws, &c., until about ten days previous to sending for me, when the abscess broke and discharged freely, to her great relief.

I directed a bath of a weak solution of salt in warm water; gave ʒii of liq. ammon. acet. every two hours; at bedtime, grs. v. calomel followed with oil in the morning; this produced three copious black stools, very offensive. Dressed the abscess with equal parts of ungt. hydrarg. oxid. rub. and cerat. plumb. sacch. on lint. Syringed it twice a day with chlorinated soda water, and occasionally applied a poultice made with brewers' yeast and mush.

4*th*. Eruption subsiding, itching very much diminished; continued remedies; gave soup diet; abscess less offensive.

6*th*. Eruption had nearly disappeared; patient much better; appetite improving, jaundice had increased, bowels costive, pulse 100, no headache; gave grs. iii. pot. iod. every four hours; wine, soup, and milk; grs. v. calomel at bedtime, followed with oil, produced free purging, dark and very offensive; touched the margin of the abscess with argt. nit., and changed dressing to aromatic wine and lint.

8*th*. Eruption has disappeared; yellowness subsiding; occasionally sickness at stomach; abscess appeared to be doing well; discontinued *pot. iod.*; gave oil; stools still dark and offensive.

10*th*. Expressed herself as doing very well except from pain in

the back, which came on every twenty minutes with great regularity. I supposed they were labor-pains, but as there had been no *show*, and she being a young woman, I made no examination. Ordered tr. opii. gtt. xlv., in starch water, every four hours, as an injection, until the pains subsided; she used four and became quite easy until about 2 o'clock next morning, when the pains returned, and she was delivered about 9½ A. M., on the 11th, of a female child which appeared to have arrived nearly at full term; there was no unusual flooding at the time of delivery.

I saw her daily and she continued to do well; gave her soup, wine, milk, &c.

On the 15th, the abscess had nearly ceased discharging; it became now very painful, the inflammation extending down the neck. On the 16th, it had pointed near the surface, about two and a-half or three inches below *the original opening*. I should have opened it at this point, but the patient was quite weak, and I deferred doing so for one day; during the night of the 15th, after making a little exertion, she was taken with nausea and vomiting, which were followed by passive uterine hemorrhage, so that she saturated thirty napkins in about twelve hours. I gave her freely of the wine of ergot two and a-half f℥, during the twelve hours, removed the pillow from her head, raised her hips, &c. On the evening of the 16th, the hemorrhage stopped, leaving the patient pale and weak, with a pulse 130, feeble; the discharge from the abscess was now mixed slightly with blood, and there was also slight oozing of blood from the gums. Ordered *wine-whey*, broth, &c. Had rather a restless night.

At about 9½ A. M., on the 17th, she raised up in bed, and immediately blood gushed from the abscess, and in a few minutes she was dead.

I could not obtain the privilege of an examination, and it is impossible to tell where the blood came from; but, from the suddenness and rapidity of the hemorrhage, together with the bright color of the blood and the rapid termination of the case, I have no doubt it was from a ruptured artery, either the carotid or submaxillary.

LEUCOCYTHÆMIA.

Dr. Wood called the attention of the College to a form of disease, which has been described by Dr. Bennett, of Edinburgh, under

the name of *leucocythæmia*, the leading characteristic of which is an excess of the white corpuscles of the blood. There was now a case of the disease in the Pennsylvania Hospital. The patient, a male of about 17 years of age, was admitted laboring under symptoms of anæmia, with some anasarcous effusion, general debility, and great enlargement of the spleen. The blood was examined by Dr. Adenell Hewson, resident physician of the Hospital, who is accustomed to microscopic investigations, and found by him to contain a great excess of white corpuscles. There could be no doubt that it was a case of the leucocythæmia of Dr. Bennett. The patient was put upon the use of iron and quinia, with a good diet. Under this treatment the dropsical symptoms and enlargement of the spleen rapidly diminished, and the patient soon became restored to a degree of robustness, which was in strong contrast with the debilitated appearance he presented at his entrance into the institution. The spleen was evidently diminished in bulk; but at the same time the liver was found to have become enlarged. On examining the blood under the microscope, it still exhibited the same excess of white corpuscles. Dr. Wood supposed that the patient had been overstimulated by the treatment to which he had been subjected. A less invigorating diet was directed, small doses of blue mass were administered, and a blister was applied over the right hypochondriac region. Under this treatment the condition of the liver became improved; but, as the symptoms of anæmia reappeared, and the spleen began again to enlarge, a blister was applied over the left hypochondrium, and nitromuriatic acid was substituted for mercury. The viscual disease now rapidly diminished; but as the anæmia continued, recourse was again had to chalybeates. All the symptoms now improved; and an examination of the blood showed a very considerable diminution in the number of white corpuscles. When the patient was last seen by Dr. Wood, the spleen was of nearly its natural dimensions, and the anæmic symptoms had almost disappeared; but the liver still remained somewhat enlarged.

BOND'S SPLINT.

Dr. NORRIS stated that since the last meeting of the College five or six cases of fracture of the lower end of the radius had been received into the Pennsylvania Hospital, all of which were treated

by the application of Dr. Bond's splint. One of these was a very bad case; the reduction of the fracture was, however, very readily effected, and the patient, after the application of the splint, complained of little or no pain in the fractured extremity. All of these cases have so far done remarkably well, the patients experiencing a far greater degree of comfort in the injured limb than is usual in cases treated by the splints formerly in use.

There not being a quorum present for the election of Fellows, it was, on motion, resolved, that an adjourned meeting of the College be held for that purpose, on Tuesday evening the 27th instant.

Adjourned Meeting, January 27th, 1852.

Dr. Wood, President, in the chair.

Present, twenty-four members.

The following were duly elected Fellows: William Keller, M. D., William Mayburry, M. D., Alfred L. Kennedy, M. D., Ellerslie Wallace, M. D., Thomas H. Yardley, M. D.

Propositions (from 32 to 34 inclusive) for Fellowship were presented.

Stated Meeting, February 3d, 1852.

Dr. Wood, President, in the chair.

Present, twenty-eight members.

Drs. Wm. Mayburry, Thomas H. Yardley, and William Keller, appeared and signed the constitution.

The Library Committee announced that they had received from the Sydenham Society of London

The Principles of Physiology, by John Augustus Unzer, and a Dissertation on the Functions of the Nervous System, by George Prochaska; translated and edited by Thomas Laycock, M. D.

Dr. BETTON presented a disjointed cranium mounted in silver.

The subject of SMALLPOX, now prevailing in the city and adjoining districts, was introduced by Dr. PARRISH, and gave rise to a conversation in relation to the protective powers of vaccination, and on the importance of re-vaccination as a means of testing the efficacy of the previous infection, and of placing the system more fully and permanently under the vaccine influence.

A Proposition (35) for Fellowship was presented.

Stated Meeting, March 2d, 1852.

DR. WOOD, President, in the chair.

Present, thirty-four members.

Drs. ELLERSLIE WALLACE and ALFRED L. KENNEDY appeared and signed the constitution.

The Librarian announced the receipt of

An Address on the occasion of the Centennial Celebration of the Founding of the Pennsylvania Hospital, delivered June 10th, 1851, by George B. Wood, M. D.—From the Author.

On the Progress of Recent Science; a Lecture, introductory to the course of Practice of Medicine, by J. K. Mitchell, M. D., Professor in the Jefferson Medical College of Philadelphia.—From the Author.

A Notice of the Origin, Progress, and Present Condition of the Academy of Natural Sciences of Philadelphia, by W. S. W. Ruschenberger, M. D., Surgeon U. S. N. Read before the Society, February 10, 1852.—From the Author.

A memorial was presented by Dr. COATES, signed by twenty-nine of the Fellows, who are at the same time members of the Academy of Natural Sciences, setting forth the disadvantage at which they

are placed in consequence of the meetings of the College falling on the same night with those of the Academy; and praying the College to consult the convenience and usefulness of the present and future members of both bodies, by so arranging its time of meeting as to render it practicable for the same individuals to attend both.

On motion, the said memorial was referred to a committee, consisting of Drs. NORRIS, W. H. KLAPP, and WEST, with instructions to report such action as they may deem it expedient for the College to take in relation thereto.

Dr. RUSCHENBERGER presented the following

REPORT ON METEOROLOGY AND EPIDEMICS FOR THE YEAR 1851.

According to a table appended and marked 1, which has been prepared from the observations of Charles Peirce* and John Conrad, M. D., of the Pennsylvania Hospital, the mean annual temperature at Philadelphia has varied only five degrees in the course of sixty years, from 1790 to 1849, inclusive; the lowest mean annual temperature being 49°, and the highest 54°. The mean annual temperature is 52.04° F. The table exhibits the mean temperature of every month during sixty years; the coldest month is February, and the warmest, July. The month of September seems to be the most uniform in temperature; the range of the mean being from 60° to 70°, or a difference of ten degrees in the course of sixty years. The widest difference of mean monthly temperature is in November, which is equal to 23° F.; the lowest mean being 28°, and the highest, 51°.

A second table, marked 2, shows the mean temperature of each month for fourteen years, from 1838 to 1851 inclusive, which has been compiled from observations made by Dr. John Conrad at the Pennsylvania Hospital. According to this table, the mean temperature, both of the year and of the months, is somewhat higher than it is shown to be in the preceding table, (No. 1.)

Table No. 3 shows the quantity of rain and snow which fell in each month for twenty-five years, from 1826 to 1850, inclusive. It

* A meteorological account of the weather in Philadelphia from January 1, 1790, to January 1, 1847, including fifty-seven years. By Charles Peirce. Lindsay & Blakiston, Philadelphia, 1847.

has been compiled from the observations of Mr. Charles Peirce, and those of Dr. John Conrad, at the Pennsylvania Hospital. In this series of twenty-five years there appears to be no uniformity in the quantity of rain which falls in any month. According to this table, February, on an average, is the dryest month, and July and August the wettest months in the year. In the period embraced in the table, the smallest quantity of rain fell in 1848, when it measured 34.98 inches; and the largest was in 1841, when it measured 59.20 inches. The difference between the greatest and least annual fall of rain was 24.22 inches. The quantity of rain seems to hold some relation with temperature; the dryest years being also the warmest.

The following table, compiled from observations made by Dr. John Conrad, of the Pennsylvania Hospital, shows the monthly mean temperature, and the hygrometric state of the atmosphere for the year 1851.

Meteorological Table for the year 1851.

	Temperature.						Hygromet. Observations.			
	9 o'clock A.M.		Mean of the month.	Range of therm.		Average of 60 years.	Actual dew point.	Degree of dryness.	Inches of rain.	Average of 25 years.
	Max.	Min.		Max.	Min.					
January . .	42.42	28.03	35.22	57	9	30.46	23.22	10.10	1.23	3.23
February .	46.85	32.71	39.78	60	14	29.18	28.43	9.41	3.11	2.83
March . .	51.	36.	43.05	74	28	38.24	31.30	11.51	3.47	3.72
April . . .	59.50	44.36	51.93	74	35	51.42	36.26	14.84	4.56	3.26
May . . .	71.74	53.42	62.58	87	39	62.94	50.25	12.29	4.81	3.53
June . . .	78.90	61.90	70.40	92	50	73.12	57.40	13.23	3.43	3.91
July . . .	85.	68.64	76.82	92	60	75.58	61.32	15.90	2.52	4.29
August . .	79.80	65.	72.40	90	54	72.10	60.00	12.40	2.55	4.34
September .	75.80	59.13	67.46	93	42	65.67	56.20	11.26	1.13	3.30
October . .	64.71	48.39	56 55	76	35	53.99	46.10	10.45	3.02	3.30
November .	47.53	36.07	41.80	67	29	42.67	30.36	11.37	3.35	3.53
December .	35.84	24.25	30.03	57	6	31.56	15.48	14.55	2.27	3.93
For the year			54	93	6	52.04			35.50	43.76

During the year the thermometer ranged from 6° F. to 93° F. The mean temperature of the year was 54°, or 2° above the average mean of sixty years.

The quantity of rain was 35.50 inches, or 8.26 inches less than the annual mean of twenty-five years.

The year 1851 was comparatively warm and dry.

The reports of deaths to the Board of Health of Philadelphia for the year 1851, arranged in four tables, are appended. Each table embraces a quarter or thirteen weeks, and exhibits the number of deaths from various causes; those of adults and of minors being stated in separate columns.

To the table of the fourth quarter are added the aggregate mortality of the preceding quarters, and the total for the year.

The total number of deaths from all causes, in the year ending December 29, 1851, was 8,871, which is an excess of 383 over that of the year 1850.

Of the total number, 2,589, which includes 470 stillborn, died under one year of age; 950 between one and two years; and 900 between two and five years. Exclusive of the stillborn, 3,969 or 44.75 per cent. of the whole number died under the age of five years. During the past year the deaths of children under five years amounted to rather more than 48 per cent. of the total mortality.

The number of persons who died under 20 years of age was 5,285; and the number beyond that period was 3,652. Excluding the stillborn, the total mortality was 8,401; of this number 529, or 6.29 per cent., had lived seventy years and upwards; 183 passed the 80th, 30 the 90th, and 2 the 100th year of life.

The aggregate includes 732 from the Almshouse, 576 people of color, and 150 from the country; in all 1,458.

According to the table, 209 deaths are set down under the head of "casualties"; 260 under the head of "debility"; 9 are attributed to "fractures"; 1 to "wounds"; 186 to "old age"; and 141 to "unknown" causes, making an aggregate, including the stillborn, of 1,276. Deducting this sum leaves 7,595, which is the number of deaths from disease.

The mortality from diseases of the lungs and air-passages, exclusive of whooping-cough, is 1,891, or 22.50 per cent. of the whole number (8,401) of deaths from disease; and including whooping-cough it is 2,013, or 24.08 per cent. of the whole, which is about a half of one per cent. less than the mortality of the past year.

In the year 1850, the deaths from "consumption of the lungs" was 11.30 per cent. of the whole mortality; this year it is 10.48 per cent., or nearly one per cent. (0.82) less.

Mortality from Diseases of the Lungs and Air-passages.

	Total 1850.	1st Qr. 1851.	2d Qr. 1851.	3d Qr. 1851.	4th Qr. 1851.	Total 1851.
Abscess, pulmonary	12	4	1	7	3	15
Asphyxia	17	5	2	4	9	20
Asthma	13	5	1	1	4	11
Congestion of the lungs	58	22	19	12	15	68
Consumption, laryngeal	900	145	3	1	0	889
Consumption of the lungs	907	142	265	248	226	881
Croup	143	55	40	18	67	180
Disease of the chest	00	00	00	1	1	2
Disease of the lungs	32	10	8	7	3	28
Dropsy of the chest	63	14	24	12	12	62
Effusion on the chest	0	1	2	0	3	6
Effusion on the lungs	4	0	0	0	1	1
Emphysema of the lungs	0	3	0	0	0	3
Empyema	0	1	1	0	0	2
Gangrene of the lungs	0	2	1	2	1	6
Hepatization of the lungs	0	0	1	0	0	1
Hemorrhage from the lungs	24	6	8	10	5	29
Influenza	0	1	4	0	1	6
Inflammation of the bronchi	191	57	43	16	59	175
" " larynx	23	9	7	5	4	25
" " lungs	352	104	103	43	102	352
" " pleura	11	4	0	0	5	9
Total	1850	450	533	387	521	1891
Whooping-cough	117	36	26	39	21	122
Total	1967	486	559	426	542	2013

The number who have died from diseases of the nervous system, including ten who have perished from puerperal convulsions and puerperal mania, is 1,541, or 18.34 per cent. of the whole mortality (8,401) exclusive of the stillborn.

Mortality from Diseases of the Nervous System.

	Total 1850.	1st Qr. 1851.	2d Qr. 1851.	3d Qr. 1851.	4th Qr. 1851.	Total 1851.
Abscess of brain	0	1	2	1	1	5
Apoplexy	97	22	20	20	23	85
Chorea	0	0	1	1	1	3
Compression of brain	5	3	1	1	1	6
Congestion of brain	97	22	33	51	24	130
Consumption of brain	00	0	0	1	1	2
Convulsions	444	112	123	146	98	479
Disease of the brain	88	11	22	26	15	74
Dropsy of the brain	283	73	68	66	38	245
Effusion on the brain	74	16	8	31	23	78
Epilepsy	14	6	6	13	3	28
Inflammation of the brain	218	54	57	59	32	202
Insanity	0	2	0	2	0	4
Irritation of brain or spinal marrow	0	0	0	1	0	1
Mania	5	1	2	4	0	7
Mania à potu	54	14	24	20	6	64
Neuralgia	5	2	1	0	0	3
Palsy	71	12	12	13	13	50
Softening of the brain	10	6	11	7	4	28
Spinal ramollissement	0	0	0	1	0	1
Teething	23	3	1	7	5	16
Tetanus	11	3	6	2	4	15
Trismus	0	1	1	2	1	5
	1501	364	399	475	293	1531
Puerperal convulsions		0	1	5	3	9
" mania		0	1	0	0	1
		364	401	480	296	1541

The number of deaths from diseases of some of the organs of nutrition, as stated in the following table, is 1,793, or 21.34 per cent. of the whole mortality.

Mortality from Diseases of some of the Organs of Nutrition.

	Total 1850.	1st Qr. 1851.	2d Qr. 1851.	3d Qr. 1851.	4th Qr. 1851.	Total 1851.
Cancer of pylorus	0	1	0	0	0	1
" stomach and bowels	0	5	2	5	1	13
Cholera	6	0	0	0	0	0
Cholera infantum	505	3	33	344	17	397
" morbus	24	1	3	24	0	28
Cirrhosis of the liver	0	4	0	2	2	8
Colic	5	2	3	2	0	7
Colica pictonum	2	2	0	0	0	2
Constipation	0	0	0	1	0	1
Consumption of the bowels	0	0	0	1	0	1
Diarrhœa	208	9	34	77	37	157
Disease of the liver	26	5	3	2	3	13
" stomach and bowels	29	1	7	7	4	19
Dropsy	0	40	23	34	26	123
" abdominal	0	5	5	5	14	29
Dysentery	421	27	47	224	103	401
Dyspepsia	0	0	0	1	1	2
Gout	0	3	0	0	2	5
Icterus	0	2	5	7	3	17
Ileus	0	1	0	1	1	3
Inflammation of liver	37	6	6	16	6	34
" " peritoneum	62	17	16	15	12	60
" " stomach and bowels	187	46	29	56	36	187
Marasmus	217	33	45	114	63	255
Obstruction of bowels	0	0	1	0	2	3
Scrofula	57	14	17	15	12	48
Tabes mesenterica	25	4	8	20	13	45
Tuberculosis	16	9	5	2	2	18
Ulceration of stomach and bowels	19	1	4	7	4	16
	1846	291	296	982	364	1793

The mortality from diseases of the generative system and its appendages, is stated in the following table.

	1st Qr.	2d Qr.	3d Qr.	4th Qr.	Total 1851.
Abortion	0	1	0	0	1
Cancer of the mammæ	1	3	2	5	11
" uterus	3	8	3	3	17
Childbed	3	0	2	2	7
Convulsions, puerperal	0	1	5	3	9
Disease of the bladder	0	0	0	1	1
" kidneys	0	4	3	1	8
" ovaries	0	0	0	1	1
" prostate gland	1	0	0	0	1
" urinary organs	1	0	0	0	1
" uterus	0	0	0	1	1
Dropsy, ovarian	0	1	0	1	2
Enlargement of prostate	0	0	1	0	1
Hemorrhage from uterus	3	3	2	4	12
Inflammation of the bladder	2	1	3	4	10
" " kidneys	2	0	2	0	4
" " prostate gland	0	2	0	0	2
" " uterus	5	1	5	5	16
Mania, puerperal	0	1	0	0	1
Rupture of bladder	0	0	1	0	1
Stricture of the urethra	0	0	1	0	1
Syphilis	1	1	3	0	5
Tumor, ovarian	0	0	0	1	1
Ulceration of the bladder	1	0	1	0	2
" " uterus	0	0	0	1	1
	23	27	34	33	117

The following table shows that the number of deaths from the various fevers was 746, or 8.87 per cent. of the whole mortality. More than one-half the deaths from fever were from scarlatina alone. Of the 400 who died of this disease, only 9 were above twenty years of age. The smallest number of deaths from scarlet fever was in the third quarter (July, August, and September). The disease prevailed throughout the year; deaths from it are recorded every week, excepting two, the 8th and 12th of the third quarter.

Mortality from Fevers.

	Total 1850.	1st Qr. 1851.	2d Qr. 1851.	3d Qr. 1851.	4th Qr. 1851.	Total 1851.
Fever	32	3	5	11	6	25
" bilious	15	2	0	0	0	2
" catarrhal	3	0	0	0	0	0
" cerebral	0	1	1	0	0	2
" congestive	17	1	1	4	4	10
" continued	3	2	0	0	0	2
" gastric	0	1	0	0	0	1
" hectic	5	3	0	1	0	4
" intermittent	15	0	0	5	2	7
" nervous	1	0	0	0	0	0
" puerperal	30	14	10	11	6	41
" remittent	35	4	11	19	3	37
" scarlet	439	154	117	29	100	400
" typhoid	105	20	30	36	41	127
" typhus	69	19	27	24	18	88
	769	224	202	140	180	746

The mortality from measles, smallpox, and varioloid is exhibited in the following statement. The aggregate number of deaths from these diseases is 240, or 2.85 per cent. of the total mortality.

	Total 1850.	1st Qr. 1851.	2d Qr. 1851.	3d Qr. 1851.	4th Qr. 1851.	Total 1851.
Measles	69	4	1	3	8	16
Smallpox	40	19	30	29	138	216
Varioloid	1	0	1	1	6	8
	110	23	32	33	152	240

The following table embraces those diseases only which were most fatal, and consequently most prevalent. Where the number of deaths does not exceed 90, a disease is not mentioned. The number of deaths from the same causes in the year 1850, is stated in the first column, to afford means of comparison.

	Total 1850.	1st Qr. 1851.	2d Qr. 1851.	3d Qr. 1851.	4th Qr. 1851.	Total 1851.
Cholera infantum	505	3	33	344	17	397
Consumption of the lungs	907	142	265	248	226	881
Congestion of the brain	000	22	33	51	24	130
Convulsions	444	112	123	146	98	479
Croup	143	55	40	18	67	180
Debility	201	52	55	84	69	260
Diarrhœa	208	9	34	77	37	157
Disease of the heart	101	33	32	17	16	98
Dropsy	116	40	23	34	26	123
Dropsy of the brain	283	73	68	66	38	245
Dysentery	421	27	47	224	103	401
Fever, scarlet	439	154	117	29	100	400
Fever, typhoid	105	20	30	36	41	127
Inanition	39	17	26	44	19	106
Inflammation of brain	218	54	57	59	32	202
" of bronchi	191	57	43	16	59	175
" of lungs	352	104	103	43	102	352
" of stomach and bowels	187	46	29	56	36	187
Marasmus	217	33	45	114	63	255
Old age	185	41	39	54	52	186
Smallpox	40	19	30	29	138	216
Unknown	147	24	31	40	46	141
Whooping-cough	117	36	26	39	21	122

It appears from the above statement, that the mortality of 1850 differs very little from that of the year 1851, except only that the number of deaths from smallpox is very much increased.

(1). *A Table of the Mean Temperature of every month during a period of sixty years, from* 1790 *to* 1849, *inclusive.* Collated by W. S. W. RUSCHENBERGER, M. D.

	1790.	1791.	1792.	1793.	1794.	1795.	1796.	1797.	1798.	1799.	1800.	1801.
January . .	44	30	32	40	32	30	30	28	28	30	28	34
February . .	32	28	30	32	31	30	28	26	26	29	27	28
March . . .	38	40	37	34	36	34	38	36	34	35	36	36
April . . .	50	54	52	46	44	50	48	46	44	45	47	54
May . . .	56	58	58	62	61	68	64	64	65	68	70	66
June . . .	70	74	72	76	70	70	72	73	74	71	72	70
July	78	80	77	81	73	78	75	76	80	73	74	72
August . . .	74	75	76	74	71	70	72	74	77	71	72	70
September .	66	64	63	70	62	64	68	66	69	66	68	64
October . . .	50	52	50	64	50	52	50	55	55	54	52	53
November . .	40	41	40	38	40	41	43	40	40	42	41	43
December . .	30	32	30	30	31	30	32	30	28	29	30	34
Annual mean temperature	52	52.25	52	53	50	51	51.5	51	51	51	51.5	52

	1802.	1803.	1804.	1805.	1806.	1807.	1808.	1809.	1810	1811.	1812.	1813.
January . .	38	32	28	29	30	28	27	29	36	32	28	29
February . .	34	28	28	29	28	28	32	26	27	26	27	27
March . . .	40	40	38	40	38	39	37	35	37	40	37	39
April . . .	52	54	50	52	47	49	50	46	48	50	48	49
May . . .	71	60	62	63	67	65	68	64	58	62	60	59
June . . .	73	69	67	71	70	72	74	73	70	72	70	69
July	74	72	70	73	73	74	75	75	72	74	73	72
August . . .	72	70	69	70	69	71	73	72	69	73	71	70
September .	66	65	70	66	64	66	67	68	66	68	67	66
October . . .	54	56	55	52	55	56	53	54	56	55	56	54
November .	44	46	44	44	45	44	40	43	45	43	47	44
December . .	28	30	34	30	32	32	30	29	28	30	28	28
Annual mean temperature	53.5	52	51	51.5	51.5	52	52	51	51	52	51	50.5

	1814.	1815.	1816.	1817.	1818.	1819.	1820.	1821.	1822.	1823.	1824.
January . .	28	26	32	34	34	30	26	25	29	34	32
February . .	28	24	28	26	26	28	30	32	27	36	34
March . . .	38	38	36	40	37	39	38	37	36	40	39
April . . .	48	52	47	53	54	53	54	53	52	51	54
May . . .	62	64	57	65	62	60	62	65	70	64	67
June . . .	71	73	64	74	74	72	73	72	75	71	73
July . . .	73	74	68	74	75	73	74	74	80	74	75
August . . .	70	72	66	72	73	71	70	73	76	70	71
September . .	64	67	62	64	66	64	64	65	68	65	66
October . . .	55	57	52	54	56	54	56	55	53	55	54
November . .	45	42	41	45	43	44	45	41	42	46	44
December . .	30	26	32	31	34	26	28	26	30	36	34
Annual mean temperature	51	51.25	49	52.5	53	51	51.75	51.5	53	53.5	53.75

A Table of the Mean Temperature of every month during a period of sixty years.—(Continued.)

	1825.	1826.	1827.	1828.	1829.	1830.	1831.	1832.	1833.	1834.	1835.
January . .	34	28	28	39	29	28	26	25	30	29	28
February . .	32	26	27	40	27	25	26	27	30	29	28
March . . .	40	38	36	42	38	40	39	34	39	38	39
April . . .	55	56	50	56	55	54	53	55	54	53	56
May . . .	62	71	62	65	64	64	66	62	63	64	64
June . . .	75	73	71	77	73	72	77	71	65	69	71
July	80	75	75	80	75	80	78	78	77	77	76
August . . .	72	72	70	76	75	75	76	74	74	73	72
September .	64	65	64	65	66	65	68	66	67	65	66
October . . .	56	52	46	56	56	54	55	57	56	56	54
November . .	44	43	38	42	44	40	42	28	44	43	44
December . .	34	37	36	38	34	32.5	30	25	32	33	28
Annual mean temperature	54	53	50	54	53	52.5	53	51	52.5	52.25	52

	1836.	1837.	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.
January . .	28	28	38	30	24	33	34.5	38	27	38
February . .	24	38	24	33	39	29	36	27	32	35
March . . .	35	39	41	41	44	40	47	30	42	44
April . . .	50	50	47	54	55.5	47	53	50	56	53
May	63	61	58	62	61	58	60	58	65	59
June . . .	67	69	75	66	69	73	68	72	70	72
July	76	78	81	74	74	75	74	74	74	76
August . . .	70	75	77	70	74	71	72	75	73	74
September .	67	64	67	64	60	67	64	68	66	65
October . .	49	54	50	56	54	50	53	52	53	56
November . .	41	45	40	40	43	42	38	41	44	46
December . .	33	32	29	34	30	35	32	34.5	35	28.5
Annual mean temperature	50.25	52.25	53	52	52.25	51.5	52.75	51.5	53	54

	1846	1847.	1848.	1849.	Mean of 60 years.	Range of 60 years.		Difference.
						Max.	Min.	
January . . .	33.5	33 20	36.60	29 00	30.46	44	24	20
February . .	28	33.37	33.60	27.50	29.18	40	24	16
March . . .	42	38.74	39.40	42.58	38.24	47	34	13
April . . .	52.5	51.23	54.36	50.60	51.42	56	44	12
May . . .	63	61.71	65.84	58.40	62.94	71	56	15
June . . .	69	70.52	73.43	73.50	73.12	77	64	13
July . . .	74	76.44	74.82	74 66	75.58	81	68	13
August . . .	75	73.50	74.50	74.40	72.10	77	66	11
September .	69.5	65.92	64.55	65.40	65.67	70	60	10
October . .	55	54.	56.19	55.27	53.99	64	49	15
November . .	46	48.21	41.00	51.50	42.67	51	28	23
December . .	35.8	39.54	43.25	34.41	31.56	39	26	13
Annual mean temperature	54	53.86	54.80	53.10	52.04	54	49	5

(2). *Table of the Mean Temperature of each month for fourteen years, from Observations made by John Conrad, M. D., at the Pennsylvania Hospital.* Compiled by W. S. W. RUSCHENBERGER, M. D.

	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.
January . . .	35.	29.50	24.30	33.20	35.10	38.30	27.	37.	33.30	33.20
February . . .	23.	33.30	39.40	30.30	38.30	28.50	31.90	34.50	29.70	33.40
March	40.90	42.	44.	41.20	47.60	30.	42.90	44.70	42.70	38.70
April	46.10	54.30	55.60	48.00	52.40	51.10	56.60	52.	52.20	51.20
May	58.10	62.	62.10	58.70	59.	60.	65.60	59.70	64.00	61.70
June	73.	66.30	69.30	72.	68.	70.90	69.50	71.50	68.70	70.50
July	78.	75.20	73.90	74.90	75.80	74.40	75.10	76.	74.60	76.40
August	74.90	70.70	74.	72.40	72.30	75.40	73.60	74.60	74.80	73.50
September . . .	65.90	63.80	61.50	67.80	64.50	68.80	66.50	65.60	70.80	65.90
October	49.70	56.60	54.60	49.30	53.00	52.00	53.30	55.80	55.20	54.
November . . .	39.10	39.80	43.90	42.00	38.70	39.90	43.40	45.60	49.70	48.20
December . . .	28.40	34.80	30.70	34.50	32.60	33.90	34.50	28.30	35.80	39.50
Mean annual temperature	51.	52.35	51.10	51.95	53.02	51.26	53.32	53.77	54.38	53.85

	1848.	1849.	1850.	1851.	Mean of 14 years.	Maximum mean.	Minimum mean.	Difference.
January. . . .	36.60	29.	35.80	32.20	33.01	37.	27.	10.
February . . .	33.60	27.50	37.	38.80	32.80	39 90	23.	16.80
March	39.40	42.60	39.50	43.50	41.40	44.70	30.	14.70
April	54.40	50.60	48.10	52.	51.80	56.60	46.10	10.50
May	65.80	58.40	57.70	62.60	61.90	65.80	57.70	8.10
June	73.40	73.50	71.90	70.40	70.70	73 50	66.30	7.20
July	74.80	74.60	77.40	76.80	75.50	78.	73.90	4.10
August	74.50	74.40	73.	72.40	73.60	75.40	70.70	4.70
September . . .	64.50	65.40	66.90	67.40	70.30	70.80	61.50	9.30
October	56.20	55.30	56.	56.60	54.20	56.60	49.30	7.30
November . . .	41.	51.50	48.	41.80	43.70	51.50	38.70	12.80
December . . .	43.20	34.40	36.40	30.	34.	43.20	28.30	14.90
Mean annual temperature	54.78	53.10	53.95	54.04	52.99	54.38	51.00	3.38

(3). *A Statement of the quantity of Rain, in inches, which fell in each month at Philadelphia, from the year* 1826 *to* 1850, *a period of twenty-five years.* Compiled by W. S. W. RUSCHENBERGER, M. D.

	1826.	1827.	1828.	1829.	1830.	1831.	1832.	1833.	1834.	1835.
January . . .	1.50	3.50	2.00	5.50	1.50	5.00	4 00	4.00	2.50	2.75
February . . .	2.25	3.50	2.75	3.75	2.00	2.00	2.50	1.25	2.25	2.00
March	9.50	1.25	4.00	3.00	4.25	3.00	2.00	2.25	2.00	4.00
April	4.00	3.00	4.00	5.00	2 00	5.00	3 00	0.50	3.00	4.50
May	0.25	2.50	3.50	2.75	3.75	1.00	5.50	6 00	4.50	2.00
June	4.75	2.00	2.75	3.50	6.00	3.50	1.50	5.25	4.00	6.25
July	3 75	3.00	5.25	4.25	4.10	4.25	2.50	4.12	4.30	6.50
August . . .	2.75	5.75	1.50	4 50	4.00	5.25	5 75	3.25	0.55	2.00
September . .	2.00	1.00	4.50	2.00	3.00	5 00	1.50	4.00	3.50	2.50
October . . .	6.10	6.00	1.50	2.25	4.00	4.00	3.50	10 00	3.25	1.25
November . .	2.00	4.75	6.75	4 00	5.25	2.00	2.50	2 00	3.00	3.75
December . .	1.25	3.55	1.25	1.50	5.30	1.10	5.60	5.95	2.65	2.90
Annual quantity	40.10	39.80	39.75	42.00	45.15	41 10	39.85	48 47	35.50	40.40
Annual mean temperature	53	50	54	53	52.50	53	51	52.5	52.25	52

	1836.	1837.	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.
January . . .	7.50	2.50	2.25	5 50	2.00	7.25	1.25	1.50	2.50	3.50
February . .	3.00	3.50	2.25	2.50	3.00	2.50	4.75	3.00	1.50	5.00
March	1.75	3.75	3.75	1.50	3.00	7.00	3.00	5.00	4.50	2.50
April	3.50	3.00	3.50	1.50	7.00	6.50	5.25	4.75	1.50	2.50
May	2.25	5.00	3.50	6.75	2.75	3.50	6.00	2.00	3 00	1.50
June	7.25	3.00	6 50	4.00	6.00	3.25	3.25	1.75	3.25	3.75
July	3.00	6.00	2.25	2.50	4.50	3.25	12.00	4.50	5.25	2.75
August . . .	2.00	3.00	2.00	4.75	5.50	9.00	3.75	9.25	2.50	7.25
September . .	2.00	2.50	9.00	3.00	2.50	2.00	1 25	4.75	4.00	2 25
October . . .	3.50	0.75	5.00	3.00	5.75	3.25	1.75	3.75	5.00	2.50
November . .	3.25	3.00	3.25	3.60	2.50	5 50	2.40	4.25	3.00	2.50
December . .	4.05	1.20	1.50	7.25	6.00	6.20	3.90	4.60	3.00	4.50
Annual quantity	43.05	37.20	44.75	45.85	50.60	59.20	48.55	49.10	39.00	40.50
Annual mean temperature	50.25	52.25	53	52	52.25	51.5	52.75	51.5	53	54

	1846.	1847.	1848.	1849.	1850.	Average of 25 years.	Range. Min.	Range. Max.	Difference.
January . . .	4.50	4.73	2.03	0.73	4.77	3.23	0.73	7.50	6.77
February . . .	4.25	4.57	1.44	2.61	2.87	2.83	1.25	5.00	3.75
March	4.50	4.70	2.76	5.47	4.75	3.72	1.25	9.50	7.25
April	2.10	0.58	1.54	1.75	2.66	3.26	0.58	7.00	6.42
May	3.50	1.56	4.90	4.00	6.50	3.53	0.25	6.75	6.50
June	4.50	3.30	4.43	2.19	2.03	3.91	1.50	7.25	5.75
July	4.50	2.77	3 28	2.93	5.97	4.29	2.25	12.00	9.75
August . . .	4.25	3.18	1.71	6.97	8.33	4.34	0.55	9.25	8.60
September . .	1.25	8.07	1.80	1.40	7.73	3.30	1.00	9 00	8.00
October . . .	2.00	3 00	3.75	5 60	1.10	3.30	1.10	10.00	8.90
November . .	8.10	2.84	2.34	2.50	3.32	3 53	2 00	8.10	6.10
December . .	4.10	5.78	5.00	5.83	4.51	3.93	1.10	6.00	4.90
Annual quantity	47.55	45 08	34.98	42.08	54.54	43.76	34.98	59 20	24.22
Annual mean temperature	54	53.86	54.80	53.10	53.95				

TABLE OF MORTALITY,

Collated from returns to Board of Health of Philadelphia, for the year 1851, by W. S. W. RUSCHENBERGER, M. D.

FIRST QUARTER. (Commencing December 28, 1851.)

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total.
Abscess						1																								2	2
" abdominal			1							1																			1		1
" of brain													1																	1	1
" knee																													1		1
" lumbar																													1		1
" of lungs									1	1																			2	1	3
" pleura																			1										1		1
Albuminuria											1																		1		1
Anæmia			1										1								1	2		1					2	4	6
Angina pectoris																					1								1		1
Apoplexy	2	1	2				3		1		1						5		2		1		2		2	1	2		20	2	22
Aphthæ													1																	1	1
Asphyxia				1			1													2							1		1	4	5
Asthma					1				1						1	1								1					4	1	5
Cancer and scirrhus			1								1						1				1		1						5		5
" of mamma			1														1												1		1
" pylorus																								1					1		1
" stomach and bowels					1		1				1												2						5		5
" uterus									1								1									1			3		3
Cancrum oris											1																			1	1
Caries																				1									1		1
" of spine																				1										1	1
Casualties	1	1		3	1												2		1	1				2	1			6	7	13
" burns and scalds				1		1		2		2								2											5	8	8
" drowned					1												1						1						3		3
" exposure to cold										1																				1	1
" injury of spine																													1		1
" poisoning				3																									3		3
" suicide			1																				1						2		2
" violence																			1										1		1

Cirrhosis of liver . . .									1		1				1				1								4		4
Childbed											2												1				3		3
Cholera morbus . . .								1																				1	1
" infantum . . .		2																1										3	3
Colic									1															1			2		2
Colica pictonum . . .															1		1										2		2
Compression of brain . .					1																				1	1	2	1	3
Consumption of lungs . .	10	2	13	1	16	2	19	3	18	2	11	3	7	1	18	5	24	5	12	3	25	3	11	4	21	3	105	37	142
" laryngeal . .			1				1		1				2														5		5
Congestion																					1						1		1
" of brain . . .		1	1	1		1			3		1		4		2	2				1		3	2				13	9	22
" lungs . . .		1	3	2	1	1		2	2	2	1	1					2	1		1				2			9	13	22
Convulsions		6	1	8		10	1	6		10		10		3	1	8	1	11		6		9		14		7	4	108	112
Croup		7		4		6		1		5		4		5		3		3		6		4		3		4		55	55
Crusta lactea														1														1	1
Cyanosis						1						1		1		2				1				1				7	7
Debility	1	2	1	2	3	3	3	2	2	1	1	3	1	2	1	5	2	2	3	1	2	5	1	3	2		21	31	52
Diabetes													1				1	1									2	1	3
Diarrhœa				2				1		1					1		1	1		1	1						3	6	9
Disease of abdomen . . .									1																		1		1
" brain . . .						2				1			1		1							3		3			2	9	11
" heart . . .	1	1	3		3	1	5	1	2		1		2	1	2		3	1	2	1			1	1	1		26	7	33
" hip												1																1	1
" liver . . .			1								1				1								2				5		5
" lungs . . .	1		2									1		1	1	1		1			1				1		6	4	10
" mesenteric glands .													1										1				2		2
" prostate gland . .									1																		1		1
" skin																		1										1	1
" spine		1										2										1		1				5	5
" stomach and bowels .															1												1		1
" urinary organs . .											1																1		1
Dropsy	3	1			3		1	1	3		7		3		2	1	2	3	3		3		2		1	1	33	7	40
" abdominal . . .									1						1				1	1	1						4	1	5
" brain		4	1	8		8		5		3		4		6		5		9		4		6		3		7	1	72	73
" chest	1				1	1	1		1		2					1		1	1				2	2			9	5	14
" heart					1																						1		1
Dysentery	1	4	1				1	1	1	1	1	1	4		1	2	1	1	1				1		2		17	10	27
Effusion on brain . . .		4	1					2		1	1			2				1		1		2		1			2	14	16
" chest . . .																						1						1	1
Emphysema of lungs . .									1				1								1						3		3
Empyema											1																1		1
Enlargement of heart . .										1	1					1	1						1				3	2	5

TABLE OF MORTALITY.—1ST QUARTER—*Continued.*

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults	Total Children.	Total.
Enlargement of liver																											1		1
Epilepsy		1	1						1	1					1	1											3	3	6
Epistaxis						1																						1	1
Erysipelas				1	1	1				1	1	1	1	2	2			1	1	2	1		1	3			10	10	20
Fever					1				1											1							2	1	3
" bilious						1													1								1	1	2
" cerebral				1																								1	1
" congestive																			1								1		1
" continued						1			1																		1	1	2
" gastric																							1					1	1
" hectic													1		1		1										2	1	3
" puerperal					1		1						1		4						2		2		3		14		14
" remittent			1																						1	2	2	2	4
" scarlet	1	7	12		14		15		1	6		12		11		15		11		7		12		12		8	2	152	154
" typhoid		1	2		2		1		2	1		3	3				1	1			1		1	1			12	8	20
" typhus	1		2			1	1		3	1					3		2		1	1	1		1		1		15	4	19
Fracture									2																		2		2
" of leg																								1			1		1
" spine																	1										1		1
Fungus hæmatodes	1																										1		1
Gangrene										1	2		1		1												4	1	5
" of lungs							1										1										2		2
Gout							1		1						1												3		3
Hemorrhage				1								1						1		1					1			5	5
" from lungs							1		1								1				1			2			6		6
" stomach and bowels																					1						1		1
" umbilicus				1																					1			2	2
" uterus							1										1							1			3		3
Icterus			1																	1							1	1	2
Ileus									1																		1		1
Inanition		1	1									1		2		2		3		2		3			2		1	16	17
Inflammation																								1				1	1
" of brain		1	2	6	1	3		1	2	5		2	1	3		3		6		1		7		6		4	6	48	54
" bladder					1	1																					1	1	2
" breast		1		1				1																				3	3

Inflammation of bronchi	1	2		1		2		4		2	7	4	3	3	1	1	1	2	2	7	2	2	1	3	2	4	20	37	57
" heart													1					1	2		1	1				1	4	3	7
" kidneys																	1		1								2		2
" larynx	1			1						1						2		2			1					1	2	7	9
" liver	1						2				2														1		6		6
" lungs		2	4	5	3	2	4	5	3	8	3		3	5	3	3	1	10	2	9	4	7	3	5	6	4	39	65	104
" peritoneum			5	1	1		2		1		1		1		1				3					1			15	2	17
" pharynx											1									1							1	1	2
" pleura													1				1				1				1		4		4
" spine																			1								1		1
" stomach and bowels	3		1	2	2	3	3	2	3	1	1	1		1	1				3	6		2	3	1	1	6	21	25	46
" throat		1		2														1										4	4
" tonsils																								2				2	2
" uterus							1				1		1								1		1				5		5
Influenza																		1										1	1
Insanity						1																	1				1	1	2
Intemperance	2		2										1		3						1		1		2		12		12
Lupus											1																1		1
Malformation						1		1		1		1		1						1						2		8	8
" of heart														3														3	3
Mania																	1										1		1
Mania à potu	1						1				1		3						3		2		2		1		14		14
Marasmus	1	2		5		4		2	1	1		2		1	1	2		2	1	1		2		4		1	4	29	33
Measles		1								1						1										1		4	4
Neuralgia			1											1													1	1	2
Old age	2		4		2		6		1		2		5		3		2		2		4		3		5		41		41
Osteo-sarcoma																	1										1		1
Palsy			2				2										2				1		4		1		12		12
Perforation of stomach and bowels																									1		1		1
Purpura					1					2						1											1	3	4
Rheumatism							1	1	1									1									2	2	4
Rupture of heart									1																		1		1
Scrofula			1	1		3						3						1				2		2		1	1	13	14
Smallpox		1		5	1	1			1	1				1		1		1		1	1	1	1		1	1	5	14	19
Softening of brain									1						1			1					1		2		5	1	6
Spina bifida								1																				1	1
Stillborn		6		2		11		11		11		14		13		5		12		11		9		8		9		124	124
Strangulation																					1						1		1
Suffocation												2		1	1			1									1	4	5
Syphilis		1																										1	1
Tabes mesenterica								1		1		1						1										4	4
Teething				1																1				1				3	3

TABLE OF MORTALITY.—1ST QUARTER—*Continued.*

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total.
Tetanus									1			1								1				1			1	2	3
Trismus																								1			1		1
Tuberculosis			1					1			1		1	1		1	1			1				1			5	4	9
Tumor					1																						1		1
" ovarian																					1						1		1
Ulcer of bladder																						1					1		1
" stomach and bowels				1																								1	1
" throat		1																1										2	2
Unknown	1	1		1		1		1	2	3	1	4		4		1	2			1			1				7	17	24
Whooping-cough		3		4		2		4		3		4		3		4		1		1		1	4		2			36	36
Under 1 year	32		45		46		35		39		48		40		33		53		44		45		43		37			540	
From 1 to 2 years	15		16		9		14		12		10		7		13		15		15		15		17		11			169	
" 2 " 5 "	14		17		22		15		23		17		17		15		18		11		15		16		14			214	
" 5 " 10 "	7		12		7		9		5		9		9		14		12		11		10		11		8			124	
" 10 " 15 "			2		5		5		6		3				3		4		2		2		1		3			36	
" 15 " 20 "	3		4		4		3		2		5		6		3		6		2		4		8		3			53	1136
" 20 " 30 "	5		13		10		15		19		11		13		18		18		14		18		10		16		180		
" 30 " 40 "	9		15		12		17		24		11		11		16		19		6		20		9		13		182		
" 40 " 50 "	8		12		6		11		10		11		11		15		9		15		11		16		17		152		
" 50 " 60 "	6		9		8		5		7		6		5		11		10		5		7		7		6		92		
" 60 " 70 "	2		7		6		8		6		7		5		9		3		5		8		4		7		77		
" 70 " 80 "	3		8		8		4		7		9		6		2		3		4		7		5		6		72		
" 80 " 90 "	4		5		2		4		2				2		3		2		3		4		4		3		38		
" 90 " 100 "			2				1				1		2				1								3		10		
From the almshouse	12		13		15		11		14		7		9		17		10		14		12		6		9		149		
From the country			2		2		2		3		2		4		2		2				5		1		5		30		
People of color	7		6		4		6		12		8		3		8		7		14		11		5		17		108		108
Total mortality	37	71	71	96	52	93	65	81	75	87	56	92	55	79	74	81	65	108	52	85	75	91	55	96	71	76	803	1136	1939
Total No. of deaths weekly	108		167		145		146		162		148		134		155		173		137		166		151		147				

TABLE OF MORTALITY,

Collated from returns to Board of Health of Philadelphia, for the year 1851, by W. S. W. RUSCHENBERGER, M. D.

SECOND QUARTER. (Commencing March 30, 1851.)

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total.
Abortion											1																		1		1
Abscess											1										2								1	2	3
" of brain									1								1													2	2
" lumbar																		1											1		1
" of lungs																			1										1		1
" pelvic														1							1								2		2
Anæmia	1																1												1	1	2
Aneurism of aorta														1															1		1
Anthrax												1																	1		1
Apoplexy	1		1		5		1					7									3		1		1				20		20
Aphthæ													1																	2	2
Asphyxia				1											1															2	2
Asthma											1																		1		1
Cachexia														1															1		1
Cancer and scirrhus			1								1		1			1					1								5		5
" of face																					1								1		1
" mamma					1									1							1								3		3
" stomach and bowels																			1						1				2		2
" uterus	1		1		1				1			1						1	1						1				8		8
" spine																									1				1		1
Cancrum oris													1									1								2	2
Caries of spine									1									1				1							1	2	3
Casualties	1				2		1	1			1		2		1		1	2											8	3	11
" burns and scalds	1	1			2					1		1							2	1	1		1	2		1			7	7	14
" concussion of brain																		1												1	1
" drowned					1					1	1	1	2			1	1	3					1	2	2	1			8	9	17
" injury of head		1																												1	1
" poisoning					1																1								2		2
" suicide	1												1						1										3		3

TABLE OF MORTALITY.—2D QUARTER—*Continued.*

	Adults.	Children.	Adults.	Children.	Adults.	Children	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total.
Casualties, violence													2	1			1										3	1	4
Cholera morbus																		1			1				1		2	1	3
" infantum		1		2				1									1		2		3		6		7	1	10	33	33
Chorea																										1	1		1
Colic						1											1							1			2	1	3
Compression of brain																										1	1		1
Consumption of lungs	24	4	12	2	21	4	17	4	17	2	19	2	15	4	20	5	18	3	15	2	14	4	18	2	12	5	222	43	265
" laryngeal											1						1								1		3		3
Congestion						1															1						1	1	2
" of brain	2	1		1		2	3	1		4	1			4			1			4	1	3	2		1	3	10	23	33
" lungs	1	1	1		3	1		1	1			1	3							1	1		1		1	2	12	7	19
Convulsions		8		7	1	9	2	7		7		11		7		10		9		9	1	8	1	10	2	14	7	116	123
" puerperal											1																1		1
Croup		5		4		1		5		5		5		5				3		2		1		1		3		40	40
Cyanosis						2		1		1										1						3		8	8
Debility	1	3		2	2	1	6	2	1	4	1	3	1	2	1	2		4		2	2	4	2	6		3	17	38	55
Diarrhœa	2		1	2	2		2			1	1	1			2	1				1	2	5	1	3	2	5	15	19	34
Disease of brain		2	1	3					1	1			1					1		3	1	1		4		3	4	18	22
" breast																							1				1		1
" heart	3	2	1	1	1	1	2	2	1		2		4		1	1	1	1	1		1	1	1	1	3		22	10	32
" hip				1			1																				1	1	2
" kidneys	1				1						1														1		4		4
" liver	1														1	1											2	1	3
" lungs	1		1			1								1			1	1	1						1		5	3	8
" skin													1														1		1
" spine				1																1								2	2
" stomach and bowels	1							1			2	1			1									1			4	3	7
Dropsy	1		2		1		4		1		2		1			1	1		2		2		2		2	1	21	2	23
" abdominal			1						1							1			1		1						4	1	5
" brain		5		4		6		2		6		6		5		4		4		7	1	5		5		8	1	67	68
" chest	2			1			1	1	1	3	1		1	2		1	3				1	1	1	1	1	2	12	12	24
" heart					1						1												1					3	3
" ovarian	1																										1		1

Dysentery	1					1	1	3	3	1	1			1		3	2	1	3	2	1	3	2	2	5	11	19	28	47
Effusion of brain				1				1										2		1		1			1	1	1	7	8
" chest														1		1												2	2
Empyema																				1								1	1
Enlargement of heart					1						1						1		1	1		1			1		5	2	7
" liver		1																										1	1
" spleen	1																										1		1
Epilepsy		1							1				1		2					1							4	2	6
Erysipelas	1	3	2		1	1	4		3	4	2	1	1	1	1	1	1		1	1	1	2					18	14	32
Fever					1					1			1									2					2	3	5
" cerebral														1														1	1
" congestive			1																								1		1
" puerperal	2	1	2		1				1		1			1									1				8	2	10
" remittent	1		2	1		1	1			1				1	1	1									1		6	5	11
" scarlet		14		6	1	9		8		11		8		6		15		5	1	9		5		9	1	9	3	114	117
" typhoid	1	2	1		1		3	1	3		2	3	1	3	1		1		1			1	1	1	2	1	18	12	30
" typhus			2		1	1	2	1					1	2		2	4	1			2		3		3	2	18	9	27
Fracture of leg										1																		1	1
Gangrene				1	1																1				1		3	1	4
" of lungs																					1						1		1
Hemorrhage											1						1							1			2	1	3
" of lungs							1		2		1		1				2								1		8		8
" stomach and bowels					1	1	1	1			1		1		1										1		6	2	8
" uterus															2								1				3		3
Hepatization of lungs	1																										1		1
Hernia																	1										1		1
Icterus											1								2			1				1	3	2	5
Inanition		1		1		2		1		2		5		2		1		2		1		2		2		4		26	26
Inflammation	1		1					1																			2	1	3
" of brain	1	5		5	1	2	1	3		2		1		4	1	2		9	3	3		5		4	2	3	9	48	57
" bladder																									1		1		1
" breast						1																						1	1
" bronchi	1	3	1	2	3	1	1	4	1	5		2	1	1	2	4			2			1	1	3	1	3	14	29	43
" heart															1	1					1					1	2	2	4
" larynx	1										1							1		1						3	2	5	7
" liver	1										1		2				1				1						6		6
" lungs	5	5	2	5	3	3	2	10	2	6	4	5	7	4	3	7	4	3	1	5	2	5	1	3	2	4	38	65	103
" mouth								1																2				3	3
" peritoneum	1		1		1	1	1			1	2		1				3		1				1		2		14	2	16
" prostate gland	1																1										2		2

TABLE OF MORTALITY.—2D QUARTER—*Continued.*

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total.
Inflammation of stomach and bowels	1	1			1	3	1				1	1	1	2	2	2	1	2	2	2	1	1		1	1	2	12	17	29
Inflammation of tonsils		1							1															1			1	2	3
" throat	1	1																									1	1	2
" trachea		1																										1	1
" uterus																			1								1		1
Influenza									1		3																4		4
Intemperance	2		1		1		1		1		1		1		1		1		1		1		1		1		13		13
Malignant disease														3														3	3
Malformation						1								1						1				2				5	5
" of heart						2																				1		3	3
Mania																	1			1							1	1	2
Mania à potu	3		1		3		1		1		4		2		2				1		2		2		2		24		24
Mania, puerperal					1																						1		1
Marasmus				2		4	1	3		4	1	4		5		7		1		2		4		1		6	2	43	45
Measles														1														1	1
Neuralgia																							1				1		1
Obstruction of bowels		1																										1	1
Old age	2		3		4		3		6		3		5		2		2		2		2		1		4		39		39
Ossification of heart															1						1						2		2
Osteo-sarcoma							1																				1		1
Palsy	2		1				2	1			1				1		1		1		1	1					10	2	12
Perforation of stomach and bowels																			1								1		1
Phlebitis																			1								1		1
Purpura		1																						1				2	2
Rheumatism				1			1							1	1	1					1		1				4	3	7
Scrofula		1		2	1	2		1			1	3	1							2		1		1	1		3	14	17
Smallpox		1		2				2		4		2	4	2		2	1	3		2		1		1	1	2	6	24	30
Softening of brain			2					1				1	3		1						1				2		9	2	11
Spinal irritation														1														1	1
Stillborn		9		3		15		9		8		8		9		5		6		7		10		16		13		118	118
Stricture of œsophagus											1																1		1
Suffocation		1													1												1	1	2

Syphilis									1																		1		1
Tabes mesenterica				1	1					1		1				1		1				1		1			1	7	8
Teething																		1										1	1
Tetanus				1					1				1		1				1				1				5	1	6
Trismus															1												1		1
Tuberculosis	1		1				1	1																	1		4	1	5
Tumor, abdominal									1		1																2		2
" of brain											1																1		1
Ulcer																						1						1	1
" of glottis																				1								1	1
" mouth								1																				1	1
" stomach and bowels							1		1	1	1																3	1	4
" throat			1							1		1												1			1	3	4
Unknown	1		1	3		1	1	1		3			3	1	1	2		1	2	2		1		3	3	1	12	19	31
Varioloid								1																				1	1
Whooping-cough				2				1		3		2				1		3		4		2		5		3		26	26
Under 1 year	41		29		40		35		41		45		35		38		32		53		51		54		70			564	
From 1 to 2 years	13		14		14		9		16		8		13		12		11		12		14		17		29			182	
" 2 " 5 "	19		18		20		25		23		15		21		23		18		15		14		18		23			252	
" 5 " 10 "	5		5		5		10		9		12		9		10		10		7		8		12		13			115	
" 10 " 15 "	4		4		2		2		4		1		8		4		3				2		4		5			43	
" 15 " 20 "	6		4		2		6		3		1		5		4		3		3		4		2		5			48	1204
" 20 " 30 "	16		15		14		16		15		21		16		15		18		17		14		23		17		217		
" 30 " 40 "	21		10		15		18		10		16		16		12		15		10		10		7		17		177		
" 40 " 50 "	11		6		19		14		8		16		10		14		10		8		11		6		16		149		
" 50 " 60 "	17		6		10		7		8		16		12		9		3		7		9		11		5		120		
" 60 " 70 "	6		3		9		6		9		8		8		5		7		8		2		2		6		79		
" 70 " 80 "	2		5		10		8		6		15		8		4		5		4		6		4		11		88		
" 80 " 90 "	5		3		6		3		3		6		5				2		1		5		1		4		44		
" 90 " 100 "	1								1		3																5		
" 100 and upwards			1																								1		880
From the almshouse	6		7		14		20		18		22		20		16		12		9		14		13		24		195		
From the country	4		1		2		3		2		4		2		1		3		1		4		2		6		35		
People of color	7		9		17		11		9		15		11		19		14		9		19		7		18		165		165
Total mortality	79	88	49	74	83	83	72	87	60	96	101	82	75	91	59	91	60	77	55	90	57	93	54	107	76	145	880	1204	2084
Total No. of deaths weekly	167		123		166		159		156		183		166		150		137		145		150		161		221				

TABLE OF MORTALITY,

Collated from returns to Board of Health of Philadelphia, for the year 1851, by W. S. W. RUSCHENBERGER, M. D.

THIRD QUARTER. (Commencing June 28, 1851.)

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total.
Abscess				1		2				1				1		1				1							2	6	8
" of brain												1																1	1
" liver	1							1								1											2	1	3
" lungs	1													1			1	1	1	1	1						3	4	7
" parotid gland																								1				1	1
" pelvic				1																								1	1
Albuminuria			1																								1		1
Anæmia			2																		1		1				4		4
Angina pectoris											1																1		1
Anthrax											1																1		1
Apoplexy	2		1		1		1		3	1			2			1			1		2		2				18	2	20
Aphthæ		1				1																	1					4	4
Asphyxia				1		1										1								1			1	4	4
Asthma																											1		1
Cachexia				1						1													1					3	3
Cancer and scirrhus	1										3						1										5		5
" of face			1																								1		1
" mamma											1						1										2		2
" stomach and bowels	1								1					1			1		1								5		5
" uterus			2																1								3		3
" thyroid gland	1																										1		1
Cancrum oris												1										1						2	2
Caries																								1			1		1
" of spine																					1						1		1
Casualties					1				1			1		1			1	1	3	1	1	1					9	3	12
" burns and scalds	1				1		1		1			1	1				1			1	1		1		1		5	6	11
" concussion of brain											1			1													1	1	2
" drowned	5	2	1		5	1	2	5	3			1	1			2		2		1		1					23	9	32
" injury of breast																				1							1		1
" neglect														1														1	1
" poisoning							1						1		1			1									4		4
" suicide	1															1				1				1			4		4

Casualties, violence	1																										1		1
Childbed			1				1																				2		2
Cholera morbus	4		3		2	1	3		3	1	2		1						2		1			1			21	3	24
" infantum		39		47		44		30		32		31		21		26		26		19		10		13		6		344	344
Chorea				1																								1	1
Cirrhosis of liver			2																								2		2
Colic			1																							1	1	1	2
Compression of brain														1														1	1
Constipation						1																						1	1
Consumption of lungs	13	7	17	6	17	3	14	2	24	4	16	1	16	2	14	3	16	1	20	2	9	2	13	4	19	3	208	40	248
" bowels		1																										1	1
" laryngeal					1																						1		1
" of brain							1																				1		1
Congestion of brain	1	9	3	4	1	3	1	4		2		2		2	2	2		2		3	2	3	3	2			13	38	51
" liver		1																			1						1	1	2
" lungs	2	1	1			2					1					1		1		1			1		1		6	6	12
Convulsions	1	14	2	15	2	13	1	12		7	1	6		9	2	12	1	13		9	1	5		12		8	11	135	146
" puerperal					2										1				1						1		5		5
Cramp												1	1														1	1	2
Croup		1		3		5		1				2				3						2		1				18	18
Coup de soleil				1	1																			1			1	2	3
Cyanosis		1				1						1				1												4	4
Debility	2	4	2	8	3	10	3	6	1	9	3	5	2	2	3	3	3	2	1				2	3	1	6	26	58	84
Diarrhœa	1	6	3	5	4	7	4	4	2	4	1	2	2	6		2	3	6	2	1	3	2		1	2	4	27	50	77
Disease of arteries																			1								1		1
" brain	1	2		1		5	1	2	1	2			1	4						1	1		1	1	1	1	7	19	26
" chest																								1				1	1
" heart	2		1		2							1	1		1		2		1	1			4			1	14	3	17
" hip						1																						1	1
" kidneys							1											1				1					1	2	3
" liver														1										1				2	2
" lungs		1		1	1	1														1	2						3	4	7
" skin												1												1				2	2
" spine	1																	1						1	1		2	2	4
" spleen	1																										1		1
" stomach and bowels	2	2			1								1			1											4	3	7
Dropsy	2	1	2	2	3				3		4	1	1	1	1	2			3	1	1		3		3		26	8	34
" abdominal			1				1								1		1		1								5		5
" of brain		10		5		7		8		3		5		1		3		4		7		3		4	1	5	1	65	66
" chest	3		1		2	1	1						1		1						1				1		11	1	12
" heart																			1						1		2		2
Dysentery	15	8	9	13	11	14	6	9	16	20	11	28	18	10	14	21	12	23	15	11	6	8		8	9	9	142	82	224

TABLE OF MORTALITY.—3D QUARTER—*Continued.*

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total.
Dyspepsia											1																1		1
Eczema														1														1	1
Effusion of brain	2	1	2	2	2	1	1	3	1			2		3	1	4		1	1	1			1		2		10	21	31
Enlargement of heart			1								1	1											1	1			3	2	5
" prostate gland																	1										1		1
Epilepsy		1		1		1	3						1	2		1							2		1		7	6	13
Erysipelas	1							1	1							1	3					1	1				6	3	9
Erythema																			1								1		1
Fever		1		1	1										1	3	1		1	1					1		4	7	11
" congestive	1						1	1								1											2	2	4
" hectic																	1										1	1	1
" intermittent									1		1	2				1											3	2	5
" puerperal	1				3				2		2				1	1									1		10	1	11
" remittent										2			2	1	3	2		3	1				1	4		14	5	19
" scarlet		5		3		3		3	1			5		3			2		1		2				1		1	28	29
" typhoid			1	3	2	1		1	1	3	2		1	1	2	1		2		2	1	3	4	4		19	17	36
" typhus	3		2	1			3		1		1		4		1		1		3		1		1	1		21	3	24
Fistula													1													1		1
Fracture		1																									1	1	1
" of skull																			1		1					1	1	2
" spine					1																					1			1
Gangrene									1				1							1				1		3	1	4
" of lungs																	2									2		2
Hemorrhage				2				1												1						1	3	4
" of lungs	2					1				1			2				1		1		1			1		9	1	10
" stomach & bowels	1		1								1	1			1							1				5	1	6
" uterus													2													2		2
Hernia			1		1										1									1		4		4
Icterus				1	1	1				1			1			1			1							3	4	7
Ileus																								1		1		1
Inanition		3		6		5		3		2		1		3		2	1	3		8		2		4	1	1	43	44
Inflammation		1																						1			2	2
" of brain	1	4		4	1	5	1	3	3	8		3		5		1		7		4	1	1		2		7	52	59
" bladder				1							1								1							2	1	3
" breast																						1					1	1

Inflammation of bronchi		3		1	1			1		2		2								3			1	1		1	2	14	16
" heart	1						1											1	1				1				4	1	5
" kidneys											1												1				2		2
" larynx	1	1		2																		1					1	4	5
" liver	1		1		2	1	2	2			2			1			1				1		1		1		12	4	16
" lungs	2	6		1		4		2		2	1	3	1	4		3			3	4		2		4		1	7	36	43
" mouth and fauces																1						1						2	2
" peritoneum	1			1	1	1		1		1	1	1	3						2		1		1				10	5	15
" spine											1	1															1	1	2
" stomach & bowels	3	3	3		1	5	3	2		5	3	4	1	1	1	1	5	1		3	2	1	3	2	1	1	26	30	56
" tonsils								1								1												2	2
" throat																										1		1	1
" uterus	1		1				1		1							1											4	1	5
Insanity									1				1														2		2
Intemperance					3		2										1		1		1		5		2		15		15
Irritation of brain and spine													1														1		1
Malformation						1		1														1						3	3
Mania	1		1								1								1								4		4
Mania à potu	3		1		5		1				3		1		2				2		2						20		20
Marasmus		10	3	9	5	8		7	1	4	1	9		8	1	4		10		10	1	9	1	5	1	7	14	100	114
Measles						1						1								1								3	3
Melæna																								1				1	1
Miserere					1																						1		1
Necrosis																					1						1		1
Old age	6		5		2		5		4		4		6		6		1		6		4		4		1		54		54
Palsy	1		3				1		1				1				2				2				1	1	12	1	13
Perforation of stomach and bowels																	1										1		1
Rheumatism																									1		1		1
Rupture of bladder					1																						1		1
Scrofula	1	2		3				1								1		3	2			1				1	3	12	15
Smallpox	2	2	1	1		2		2	1	2		4	1	3			1	1		1		2		3			6	23	29
Softening of brain			1						1				1				2		2								7		7
" stomach				1										1														2	2
Spasm of epiglottis		1																										1	1
Spina bifida																						1						1	1
Spinal ramollissement		1																										1	1
Stillborn		5		12		8		10		10		6		13		6		7		13		6		6		5		107	107
Stricture of urethra																	1										1		1
Suffocation																		1										1	1
Syphilis												1						1			1						1	2	3
Tabes mesenterica		1		1		3	1	1		2		3				1		2		1				1		3	1	19	20
Teething		1		1				1		2						1								1				7	7
Tetanus					1						1																2		2

TABLE OF MORTALITY.—3D QUARTER—*Continued.*

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total.
Tinea capitis				1																								1	1
Trismus						1												1									1	1	2
Tuberculosis													1										1				2		2
Tumor															1	1											1	1	2
Tympanitis																			1									1	1
Ulcer											1																1		1
" of abdomen																									1		1		1
" bladder							1																				1		1
" stomach and bowels			1		1			1				1								1		1					5	2	7
Unknown	2	3		1	2	1				2	1	3		7	1	5		1		1	3	5	1	1	11	29	40
Varioloid																		1										1	1
Whooping-cough		3		2		5		3				5		5		3		5		3		2		2		2		39	39
Under 1 year	100		107		116		77		65		71		65		64		64		59		45		54		38			925	
From 1 to 2 years	27		34		27		30		46		34		28		29		36		32		21		15		18			377	
" 2 " 5 "	12		14		18		11		9		27		17		16		19		14		9		21		15			202	
" 5 " 10 "	10		10		13		11		11		8		10		11		9		4		5		6		8			116	
" 10 " 15 "	2		5		3		1		5		3		3		5		2		5		2				1			37	
" 15 " 20 "	13		9		5		7		7		6		3		4		4		6		2		3		3			72	1729
" 20 " 30 "	28		19		30		17		19		25		19		24		19		20		20		20		25		285		
" 30 " 40 "	15		15		14		16		22		13		18		17		17		17		13		13		14		204		
" 40 " 50 "	19		10		18		12		14		6		13		2		8		17		12		7		11		149		
" 50 " 60 "	12		17		16		7		7		15		15		5		10		12		9		10		8		143		
" 60 " 70 "	11		12		7		6		7		12		9		4		9		11		5		10		9		112		
" 70 " 80 "	11		10		10		5		8		3		6		6		7		8		5		5		2		86		
" 80 " 90 "	8		2		3		7		2		3		3		6		3		6		2		1		1		47		
" 90 " 100 "					1								1		2		1				1		1				7		
" 100 and upwards									1																		1		1034
From the almshouse	21		21		27		20		25		30		19		11		24		12		13		6		12		241		
From the country	2		3		3		4		4		4		8		4		7		6		4		8		3		60		
People of color	16		20		16		5		16		8		3		9		13		9		7		11		7		140		140
Total mortality	104	164	85	179	99	182	70	137	80	143	77	149	84	126	66	129	74	134	91	120	67	84	67	99	70	83	1034	1729	2763
Weekly mortality	268		264		281		207		223		226		210		195		208		211		151		166		153				

TABLE OF MORTALITY,

Collated from returns to Board of Health of Philadelphia, for the year 1851, by W. S. W. RUSCHENBERGER, M. D.

FOURTH QUARTER. (Commencing September 28, 1851.)

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total 4th Quarter.	Total 3d Quarter.	Total 2d Quarter	Total 1st Quarter.	Total for the year.
Abortion																													1		1
Abscess					2	1					1	1											1	1	4	3	7	8	3	2	20
" abdominal																														1	1
" of brain								1																		1	1	1	2	1	5
" knee																														1	1
" liver																												3			3
" lumbar														1												1	1		1	1	3
" of lungs								1				1								1					2	1	3	7	1	3	14
" parotid gland																												1			1
" pelvic																												1	2		3
" of pleura																														1	1
" throat																		1								1	1				1
Albuminuria					1									1						1							1			1	2
Anæmia																				1					4		4	4	2	6	16
Angina pectoris														1											1		1	1		1	3
Aneurism of aorta														1											1		1		1		2
Anthrax													1												1		1	1	1		3
Anuria							1																		1	1	1				1
Apoplexy	3		1		2		1		2		3		2		3		2		2		1		2		23		23	20	20	22	85
Aphthæ																												4	3	1	8
Asphyxia	1					1				2				1				1			2			1	1	8	9	4	2	5	20
Asthma			2												1						1				4		4	1	1	5	11
Biliary calculi	1																								1		1				1
Cachexia																												3	1		4
Cancer and scirrhus									1								3								5		5	5	5	5	20
" of face																												1	1		2
" mamma			1																1		2				5		5	2	3	1	11
" pylorus																														1	1
" stomach and bowels									1																1		1	5	2	5	13

TABLE OF MORTALITY.—4TH QUARTER.—*Continued.*

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total 4th Quarter.	Total 3d Quarter.	Total 2d Quarter.	Total 1st Quarter.	Total for the year.
Cancer of uterus	1																				3		3	3		3	17
" thyroid gland																								1			1
" spine																											1
Cancrum oris																								2	1		7
Caries																											2
" of spine																								1	1	1	5
Casualties		1		2		2				1									1	1	8	14	15	12	11	13	51
" burns and scalds		1		2						1									1		8	14	20	11	14	8	53
" concussion of brain																						1			1		1
" drowned				1																	10	1	11	32	17	3	63
" exposure to cold																								1		1	1
" injury of breast																											1
" injury of head																								1			1
" injury of spine																											2
" neglect																					2	1	1	1	2	2	18
" poisoning																					5	4	9	4	3	2	14
" suicide																					2	1	3	4	3	1	8
" violence																					2		2	1		1	7
Childbed			1																			24	24	2	3	1	28
Cholera morbus		1																				17	17	344	33	3	397
" infantum				3		2		4				3		1				1		1		1	1	1	1		8
Chorea									1												2		2	2	3	4	8
Cirrhosis of liver		1																						2		2	7
Colic																								2		2	2
Colica pictonum																									1	3	6
Compression of brain														1								1	1				1
Constipation																								1			1
Consumption of bowels		19	2	13	4	7	4	12	2	18	2	18	2	6	3	21		3	9	2	190	36	226	248	265	142	881
" lungs					2		4											1				1	1	1			2
" brain																								1			1
" laryngeal																									3	5	9
" of spine		1																			1		1	1			1

Congestion					1														1								2		2		2	1	5
“ of brain	1	2		2		1	2	1		1	1		1	1	2			2	1		1	2		2	1		10	14	24	51	33	22	130
“ liver																														2			2
“ lungs			1	1			1				1	1			2	1					1	1		1	1	3	7	8	15	12	19	22	68
Convulsions		3		3		14		3	1	8	1	7		7		4		5		5		16	1	10		10	3	95	98	146	123	112	479
“ puerperal			1				2																				8		8	5	1		9
Coxalgia												1																1	1				1
Cramp																														2			2
Croup				4		2		3		7		3		6		5		5		9		5		8		10		67	67	18	40	55	180
Crusta lactea																																1	1
Coup de soleil																														3			3
Cyanosis												1								2				2				5	5	4	8	7	24
Debility	3	3	3	3	1	2	2	5		5	1	4	1	6	1	3	2	3	1	2		5	2	2	3	6	20	49	69	84	55	52	260
Diabetes	1																										1		1			3	4
Diarrhœa		1	1	3	1	7	4	3	1	2	1	1	1	2	1				2		3	1	1		1		17	20	37	77	34	9	157
Disease of abdomen																																1	1
“ arteries																														1			1
“ brain		1	1		1	2			1						2		1	2		3				1			6	9	15	26	22	11	74
“ breast																															1		1
“ bladder															1												1		1				1
“ chest												1																1	1	1			2
“ heart	1				1	1		1	1	1	2	1	3	1	1	1					1						10	6	16	17	32	33	98
“ hip																														1	2	1	4
“ kidneys															1												1		1	3	4		8
“ knee															1												1		1				1
“ liver		1					1												1								3		3	2	3	5	13
“ lungs														1			1								1		2	1	3	7	8	10	28
“ mesenteric glands																																2	2
“ ovaries																									1		1		1				1
“ prostate gland																																1	1
“ skin																				1								1	1	2	1	1	5
“ spine														1														1	1	4	2	5	12
“ spleen																														1			1
“ stomach and bowels					1				1		1												1				4		4	7	7	1	19
“ urinary organs																																1	1
“ uterus							1																				1		1				1
Dropsy			1				1		2				2	1	4		1	2	3				4		2	3	20	6	26	34	23	40	123
“ abdominal	1		1		1		2	1	1		2			1			1				2	1					11	3	14	5	5	5	29
“ of brain		5		4		2		2		4		2		2						4		5		6		2		38	38	66	68	73	245

TABLE OF MORTALITY.—4TH QUARTER—*Continued.*

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total 4th Quarter.	Total 3d Quarter.	Total 2d Quarter.	Total 1st Quarter.	Total for the year.
Dropsy of chest			1		1		1		2		1		1		2	1			2		1		11	1	12	12	24	14	62
" heart			1										1										2		2	2	3	1	8
" ovarian									1														1		1		1		2
Dysentery	5	8	8	7	5	8	5	5	3	6	5	9	3	5	1	6	3		1	3	4		2	1			45	58	103	224	47	27	401
Dyspepsia																								1			1		1	1			2
Eczema																														1			1
Effusion of brain			1	2	1	2		1		3		1		2		1				1		1	1	2	2	1	5	18	23	31	8	16	78
" chest									1		1												1				2	1	3		2	1	6
" lungs																							1				1		1				1
Emphysema of lungs																																3	3
Empyema																															1	1	2
Enlargement of heart					1				1			1		1		1			1				1				3	3	6	5	7	5	23
" liver									1																		1		1		1	1	3
" prostate gland																														1			1
" spleen																															1		1
Epilepsy				1										1		1											1	2	3	13	6	6	28
Epistaxis			1																								1		1			1	2
Erysipelas		1	1									2				1			1	1			1				4	4	8	9	32	20	69
Erythema																														1			1
Fever								1							1	1		1						1		1	2	4	6	11	5	3	25
" bilious																																2	2
" cerebral																															1	1	2
" congestive	1		1											1	1												3	1	4	4	1	1	10
" continued																																2	2
" gastric																																1	1
" hectic																														1		3	4
" intermittent		1																		1							1	1	2	5			7
" puerperal					2										1		1						2				6		6	11	10	14	41
" remittent	1								2																		3		3	19	11	4	37
" scarlet		4				4		4		3		3		9	1	10	1	10		10	1	14		11		15	3	97	100	29	117	154	400
" typhoid	5		1	1	2		3	2	1	1	2		1		4	2	1	1		1	3	1	2	1	4	1	30	11	41	36	30	20	127
" typhus	1	1	2	1	1	2		1	1						2	1		2	1		1						10	8	18	24	27	19	88

Fistula																														1			1
Fracture																														1		2	3
" of leg																															1	1	2
" skull																														2			2
" spine																														1		1	2
Fungus hæmatodes																																1	1
Gangrene		1	1						2				1			1			1								5	2	7	4	4	5	20
" of lungs	1																										1		1	2	1	2	6
Gout									1																1		2		2			3	5
Hemorrhage			1				1							1			1			1						1	3	3	6	4	3	4	17
" of lungs					1						1		1						1						1		5		5	10	8	6	29
" stomach and bowels							1								1												2		2	6	8	1	17
" umbilicus																																2	2
" uterus							1				1										1	1					3	1	4	2	3	3	12
Hepatization of lungs																															1		1
Hernia																														4	1		5
Hypochondria			1																1								2		2				2
Icterus	1												1													1	2	1	3	7	5	2	17
Ileus													1														1		1	1		1	3
Inanition		1		1		2	1	1		1		3	1	2		1		1		3		1					2	17	19	44	26	17	106
Inflammation																														2	3	1	6
" of brain	1	1	1	2		2		2	1	1	1	3	1	3	1	5			1	2	1		1	2			9	23	32	59	57	54	202
" bladder			2						2																		4		4	3	1	2	10
" breast				1																		1						2	2	1	1	3	7
" bronchi	1			1		2		3	1	1	3	4	1	3	1	9		4	1	12		1	1	3	1	6	10	49	59	16	43	57	175
" heart					1							1	1	1													2	2	4	5	4	7	20
" kidneys																														2		2	4
" larynx								1				2						1										4	4	5	7	9	25
" liver									1		1		2				1									1	5	1	6	16	6	6	34
" lungs	2	3		3	2	4	2	4	1		1	9		7		8		5	4	3	6	3	7	9	15	4	40	62	102	43	103	104	352
" mouth and fauces																														2	3		5
" parotids																										1		1	1				1
" peritoneum	1						1		2						2				2		2		2				12		12	15	16	17	60
" pharynx																																2	2
" pleura	1		1		1		1						1														5		5			4	9
" prostate gland																															2		2
" spine																														2		1	3
" stomach and bowels	2	1	2				2	4	1	2			1	2	1	1		1			3	7	2	2	1	1	15	21	36	56	29	46	187
" tonsils																		1				1						2	2	2	3	2	9

TABLE OF MORTALITY.—4TH QUARTER—*Continued.*

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total 4th Quarter.	Total 3d Quarter.	Total 2d Quarter.	Total 1st Quarter.	Total for the year.
Inflammation of throat																						1	2	4	7
" trachea																							1		1
" uterus					1		2		1								1		5		5	5	1	5	16
Influenza																	1		1		1		4	1	6
Insanity																						2		2	4
Intemperance	3		1		1		2		3		3				4		2		24		24	15	13	12	64
Irritation of brain or spine																						1			1
Lupus																								1	1
Malignant disease																							3		3
Malformation		1		1									1		1		1		2		8	3	5	8	24
" of heart																		1		2			3	3	8
Mania																						4	2	1	7
Mania à potu					1		1					1					1		6		6	20	24	14	64
Mania, puerperal																		2					1		3
Marasmus	1	2	2	5	2	3	2	1	4	1	3	1	4	1	6	3	7	2	5	1	5	2	12	51	63	114	45	33	255
Measles							1				1					2	1		2			1	7	8	3	1	4	16
Melæna								1														1			2
Miserere																						1			1
Necrosis																						1			1
Neuralgia																							1	2	3
Obstruction of bowels										1			1						1	1	2		1		3
" trachea																		1		1	1				1
Old age	5		3		2		5		3		1		5		4		3		7		2	9	52		52	54	39	41	186
Ossification of heart																							1		1		2		3
Osteo-sarcoma																1											1	1	2
Palsy	1						1		1						2	1	1		4		2		12	1	13	13	12	12	50
Perforation of stomach and bowels																						1	1	1	3
Phlebitis																			1				1		1		1		2
Purpura													1										2	4	7
Rheumatism																		1	1	1	1	2	1	7	4	14

Rupture of bladder																													1			1
" heart																															1	1
Scorbutus													1														1		1				1
Scrofula		1					1					1				2			1	3		2		1			2	10	12	15	17	14	48
Smallpox	1	1	1	4	1	1	1	6		7	1	8	4	9	2	11	1	11	5	6	5	13	5	12	5	17	32	106	138	29	30	19	216
Softening of brain											1											1	1		1		3	1	4	7	11	6	28
" stomach																														2			2
Spasm of epiglottis																														1			1
Spinal irritation																															1		1
Spina bifida										1														1				2	2	1		1	4
Spinal ramollissement																														1			1
Stillborn		7		9		7		6		15		10		6		8		6		13		6		10		8		121	121	107	118	124	470
Strangulation													1														1		1			1	2
Stricture of urethra																														1			1
" œsophagus																															1		1
Suffocation																														1	2	5	8
Syphilis																														3	1	1	5
Tabes mesenterica		1		4				2		1		1			1	1				2							1	12	13	20	8	4	45
Teething				2								1		1		1												5	5	7	1	3	16
Tetanus					1			1					1		1												4		4	2	6	3	15
Tinea capitis																														1			1
Trismus															1												1		1	2	1	1	5
Tuberculosis					1															1							1	1	2	2	5	9	18
Tumor																			1								1		1	2		1	4
" abdominal																															2		2
" of brain																															1		1
" ovarian																																1	1
Tympanitis																														1			1
Ulcer					1															1							1	1	2	1	1		4
" of abdomen																														1			1
" bladder																														1		1	2
" glottis																															1		1
" mouth																															1		1
" stomach and bowels	1		1				1											1									3	1	4	7	4	1	16
" spine												1																1	1				1
" throat																															4	2	6
" uterus	1																										1		1				1
Unknown	2	2	1	1	2	1		3		1	2	1		5	1		1		1	5	1	2	2	8	4		17	29	46	40	31	24	141

TABLE OF MORTALITY.—4TH QUARTER—*Continued.*

	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Total Adults.	Total Children.	Total 4th Quarter.	Total 3d Quarter.	Total 2d Quarter.	Total 1st Quarter.	Total for the year.
Varioloid												1		1						2							6	6	1	1		8
Whooping-cough		1		2		2		4		3		1		2				1		1				2			21	21	39	26	36	122
Wounds					1																				1		1				1
Under 1 year	29		37		39		36		41		45		40		49		30		60		48		51		55		560	560	925	564	540	2589
From 1 to 2 years	13		10		24		15		14		17		25		18		14		15		21		22		14		222	222	377	182	169	950
" 2 " 5 "	9		13		11		15		19		16		16		17		22		25		14		23		26		226	226	208	252	214	900
" 5 " 10 "	3		10		6		3		10		9		8		8		7		9		13		10		6		102	102	116	115	124	457
" 10 " 15 "	4		1		2		2		1		1		5		4		1		2		3		4		1		31	31	37	43	36	147
" 15 " 20 "	3		5		1		10		4		9		8		6		3		7		9		2		8		75	75	72	48	53	248
																												1216	1729	1204	1136	5285
" 20 " 30 "	18		17		21		13		18		12		10		19		9		16		15		21		20		209	209	285	217	180	891
" 30 " 40 "	11		10		10		23		12		12		12		20		7		14		14		14		13		172	172	204	177	182	735
" 40 " 50 "	15		11		10		7		11		12		6		18		3		9		11		16		13		142	142	149	149	152	612
" 50 " 60 "	16		7		5		9		9		10		7		10		3		8		8		8		15		115	115	143	120	92	470
" 60 " 70 "	6		9		8		8		9		8		5		8		5		4		7		13		11		101	101	112	79	77	369
" 70 " 80 "	5		4		5		3		6		3		5		6		4		6		4		5		12		68	68	86	88	72	314
" 80 " 90 "	3		4		2		3		5		2		7		2		5		6		5		2		8		54	54	47	44	38	183
" 90 " 100 "	1								1				1								1		2		2		8	8	7	5	10	30
" 100 and upwards																													1	1		2
																												869	1034	880	869	3652
From the almshouse	15		11		7		6		9		10		11		11		7		15		16		12		17		147	147	241	195	149	732
From the country	2		6		2		3		2				1						1		2		4		4		25	25	60	35	30	150
People of color	6		6		5		15		13		25		14		10		9		14		16		17		13		163	163	140	165	108	576
Total mortality	75	61	62	76	61	83	66	81	71	89	59	97	53	102	83	102	36	77	63	118	65	108	81	112	94	110	869	1216	2085	2763	2084	1939	8871
Total No. of deaths weekly	136		138		144		147		160		156		155		185		113		181		173		193		204							

Dr. BEESLEY presented, for the inspection of the Fellows, a metallic tampon for the arrest of discharges of blood from the uterus. The tampon is of a funnel shape; hollow within, but with the small end, which is to be introduced within the vagina, closed. This instrument, Dr. Beesley stated, he had found to answer admirably for arresting hemorrhages from the uterus, whether occurring subsequent to delivery or from a diseased condition of the organ. He has found it in his practice to be more easily applied, to cause less inconvenience to the patient, to be more easily retained *in situ*, and to more effectually restrain the discharge of blood than any of the means ordinarily employed to plug up the vagina in similar cases. After it is introduced, a folded napkin is to be applied over its lower extremity and then a bandage, passing between the thighs and around the hips, in order to retain it in its place.

The following Fellows were elected Delegates to represent the College in the American Medical Association, at its ensuing session:—

John Rodman Paul,	W. S. W. Ruschenberger,	Rene La Roche,
Gouverneur Emerson,	S. L. Hollingsworth,	John D. Griscom,
Francis West,	George B. Wood,	John B. Tuft,
Alfred Stillé,	Caspar Wister,	Francis G. Smith,
John Neill,	Isaac Hays,	Anthony E. Stocker.

The following amendment to the ordinances was presented:—

"All propositions for Fellowship shall be read at the meetings of the College intervening between that at which they are presented and the meeting at which they are to be balloted for.

"No candidate who is rejected shall be again proposed for Fellowship within twelve months from the period of such rejection."

Dr. PARRISH stated, in reference to

DR. BOND'S SPLINT FOR FRACTURES OF THE LOWER END OF THE RADIUS,

That since the meeting at which Dr. Bond presented his splint, he had treated two cases by it, with a result especially gratifying. The first case was that of a gentleman, about 30 years of age, who fell

upon the ice while running to the fire which consumed Barnum's Museum, at the corner of Seventh and Chestnut Sts. The fracture was produced, as is usually the case, by the patient extending his right hand in order to save himself, thus bringing the whole force of the fall upon the palm. There was the peculiar deformity above the wrist, so well described in the paper of Dr. John Rhea Barton on this subject, with crepitation from attempting rotation of the radius.

As Dr. Bond's splint was not at hand, I was obliged to resort, for the first dressing, to the ordinary plan of compresses and bandage, with wetted binder's boards in front and behind the forearm, and by enjoining rest in the recumbent posture, with the arm upon a pillow, for the first twenty-four hours.

I, however, had a splint made agreeably to Dr. Bond's directions, and on the third day after the fracture had occurred applied it, removing all the dressings and compresses first applied.

I found no difficulty in securing the fragments perfectly by moderate pressure with a single bandage around the splint; the compresses being applied as directed in Dr. Bond's paper. The patient expressed great satisfaction and comfort from the apparatus, and in two or three days went about as usual with his arm in a sling. During the course of the treatment the dressings were removed two or three times a week, and moderate flexion of the hand and fingers practised; but owing to the relaxed position of the limb while in the splint, but little difficulty or pain was experienced by the patient on making these motions. Very little swelling or inflammation occurred during the process of reparation, and at the end of thirty-five days the splint was temporarily removed. The fracture had united perfectly without deformity, and the motions of the hand and fingers were so good that the patient could hold a pen and write with facility.

The other case was that of a boy, about 8 years of age, who was brought to the Wills Hospital two weeks after an injury which was supposed to be a sprain. After the swelling had gone down, however, the bone was found to be crooked just above the wrist, while motion of the joint was painful. By the use of considerable force the bone was restored to its proper line, and the limb placed in the splint with compresses, and a single roller around it. The splint is

still on in this case, but no stiffness of the wrist or fingers has taken place.

When it is remembered that fracture of the lower end of the radius has always been regarded as presenting unusual difficulties for its complete and perfect recovery, without deformity or stiffness of the wrist and fingers; that even when treated in the most approved and skilful manner, requiring, on the part of the surgeon, constant attention, and, on the part of the patient no little fortitude and forbearance, this improvement of Dr. Bond is really one of great value and importance.

The principles upon which it is based have been so ably laid down in the paper read to the College when the splint was presented, and which is published in our Transactions, that it is needless to recapitulate them.

There is reason to believe, however, that the same principles will apply to fractures of the forearm higher up, whether of one or both bones; and that a similar apparatus will be found more convenient and comfortable in their treatment than the present method by straight splints which include the hand and fingers.

A proposition (36) for Fellowship was presented.

Special Meeting, March 30, 1852.

The College was convened upon the call of the President, in consequence of the death of Dr. WILLIAM R. GRANT, one of its Fellows.

DR. WOOD, President, in the chair.

Present, sixteen members.

The object of the meeting being stated from the chair, the following resolutions were unanimously adopted:—

Resolved, That it is with feelings of the deepest regret the Fellows of the College have heard the announcement of the death of their colleague, Dr. William R. Grant, after an illness of only a few days' duration.

Resolved, That by this unlooked for event, the College has been deprived of a valuable member; one whose high professional character and attainments commanded the respect, while his moral worth won for him the warmest esteem of its Fellows.

Resolved, That they deeply commiserate with the family of their deceased colleague in the sad bereavement which has so suddenly befallen them; and request the Secretary of the College to tender to his surviving relatives the expression of their sincere condolence.

Resolved, That as a mark of their respect for the memory of their deceased colleague, the Fellows of the College will attend his funeral from his late residence, on Thursday morning next.

Stated Meeting, April 6, 1852.

Dr. WOOD, President, in the chair.

Present, thirty-nine members.

The Librarian announced the receipt of a copy of

The Annual Discourse before the Philadelphia County Medical Society, delivered February 10, 1852, by the President, Samuel Jackson, M.D., formerly of Northumberland. From the Society.

The following report was presented:—

The Committee appointed at the last meeting, for the purpose of considering the expediency of changing the time of meeting of the College, in conformity with a request to that effect from a number of the Fellows who are also members of the Academy of Natural Sciences, to enable them to attend the sessions of both institutions, which now occur on the same evenings, beg leave to report, that they have given the matter due attention; and, in obedience to what they deem but a proper acquiescence with the desire of those who have made the request, would recommend that, hereafter, the meetings of the College be held on the first Wednesday, instead of the first Tuesday, in the month.

[SIGNED] GEO. W. NORRIS.
W. H. KLAPP.
FRANCIS WEST.

The said report being, on motion, approved, the following proposition to amend the ordinances, in conformity with the recommendation of the committee, was presented, signed by five Fellows.

It is proposed to amend Chapter III. Sect. 1, of the Ordinances as follows: "The stated meetings shall be held on the *first Wednesday* of every month, with the exception of July, the meeting in which month shall be held on the *first Tuesday*."

The following gentlemen were duly elected Fellows: F. W. SARGENT, M. D., THOMAS HEWSON BACHE, M. D., JAMES V. EMLEN, M. D., JOSEPH HOPKINSON, M. D., U. S. N., OWEN JONES WISTER, M. D. U., S. N., WILLIAM H. HOOPER, M. D.

On motion, the name of J. H. B. McCLELLAN was added to the list of Delegates to the American Medical Association, to supply a vacancy, and the Delegates were empowered to supply any further vacancies that may occur.

Dr. EVANS called the attention of the Fellows to an improvement in Professor Meigs' watch-spring annular pessary. It consists in substituting for the coating of wax, which is destructible, and otherwise objectionable, one of gutta percha, which can readily be applied by dissolving the gum in chloroform. This coating is impervious to all fluids, and effectually resists the action of the other destructive influences to which the pessary is exposed.

A conversation took place in reference to the connection which has been said occasionally to exist between chorea, acute rheumatism, and endocarditis.

Dr. PEPPER stated that instances of the connection between chorea and acute rheumatism had been noticed in the wards of the Pennsylvania Hospital. He was of opinion that, in these cases, the involuntary muscular motions were caused by a rheumatic affection of the spinal meninges. In some instances the detection of a bellows sound in the heart had led him to believe that endocarditis was also present. He referred to one case in particular, of a young man admitted with acute rheumatism, in the course of which disease chorea made its appearance, and remained after the rheumatism had been removed. In this case a persistent bellows sound and other indications of disease of the heart were very strongly marked.

SUMMARY

OF THE

TRANSACTIONS OF THE

COLLEGE OF PHYSICIANS,

OF PHILADELPHIA.

FROM MAY 4, TO JULY 6, 1852, INCLUSIVE.

Stated Meeting, May 4th, 1852.

Dr. BACHE in the chair.

Present, twenty members.

The Committee of Publication announced that the sixth number of the Summary of Transactions had been issued.

On motion, the proposed amendments to the Ordinances not yet acted upon, were made the order of business for the next stated meeting.

Dr. REMINGTON related the history of a case of intense pruritus of the surface of the body, without eruption or discoloration, occurring in an elderly female, after the use of an anti-rheumatic nostrum prescribed by an Apothecary of this city.

Dr. PARRISH called the attention of the Fellows present to a case which had recently been under his care. A stranger, who came to the city some six weeks since on business was attacked with pneumonia of the right lung. The pulse was very remarkable, being irregular and hobbling, and continued thus for five or six days, when it

became regular, yet still a little excited. At the end of three weeks, respiration became natural, but convalescence was incomplete. There were daily exacerbations or paroxysms, which were conjectured to be the result of some old malarial poison, as the patient was from a marshy district of Carolina. Under belief that the disease was of the intermittent type, quinia was exhibited, but without the usual effects. The patient remained feeble; he could not sit up, and had attacks of fever in the evening.

On closer examination it was ascertained that the patient had suffered in former years from a chronic ulcer on the leg, which had healed about six months since. He had pain in the knee and thigh; and from the knee to within an inch of the groin, there was a hard cord along the course of the saphena vein.

A collodion blister was applied along the course of the vein, and so soon as the ulcer on the leg had become reopened the patient began to improve.

Dr. EVANS remarked that the hobbling pulse, such as described by Dr. P., as having occurred in the case just related by him, usually accompanies phlebitis, and may be regarded as one of the signs indicative of inflammation of the veins.

Dr. C. D. MEIGS stated substantially that in cases where fever occurs and continues, but in which no satisfactory diagnosis can be established after a very careful examination of the condition of all the other organs of the body, he concludes that the disease is in the venous system—that it is phlebitis. It was his opinion that the endangium, the name given to the lining membrane of the bloodvessels by Burdach, is the seat of many obscure affections. He regarded the endangium as the bloodvessel, in a physiological sense; the external coats of cellular or fibrous tissue are to be looked upon simply as mechanical or anatomical supports of the proper bloodvessel or endangium.

Dr. BELL suggested that the case described by Dr. Parrish, might have been of the hectic type, using the term in a general sense; and, in corroboration of this view, he referred to the inefficacy of quinia to arrest the disease.

Dr. MEIGS expressed his desire that the Fellows should, in the investigation of disease, give their attention to the endangium, which he regarded to be a highly sensitive tissue, and which, he believed, was capable of producing disease by altering the healthy condition of the blood, in contact with *the latter*, when, from any cause, its normal function of hæmatosis had become disturbed or destroyed.

Dr. BELL considered the endangium to be, in all probability, an insensible tissue, and had been wisely so planned as not to be readily susceptible of changes, so that its condition could not be very readily affected by morbid impressions made upon it.

Dr. EVANS agreed with Dr. Bell, in considering the endangium not very sensitive. He regarded phlebitis as an idiopathic disease. He related a case occurring in an insane patient, in which phlebitis commenced in the hand and passed successively along the median vein, to the axilla, then across the veins of the breast to the lower limb, and along the crural vein, terminating in peritonitis. When the phlebitis was cured, the mania disappeared.

Dr. MEIGS suggested that this case tended to support his theory of the influence of the endangium in the production of disease.

Dr. COATES alluded to the fact that surgeons are reluctant to tie the veins in the surgical treatment of disease, from the known liability of these vessels to become inflamed. But he did not, however, regard the endangium as a tissue performing an active part in vital changes. He alluded to the circumstance that, generally, secretion was *à travèrs*, through this membrane.

Dr. PARRISH suggested that the healing of the old sore had probably been the cause of the phlebitis in this case.

Dr. MEIGS asked if endocarditis was not in fact inflammation of the endangium.

Dr. PEPPER remarked that the right side of the heart was not affected once in a thousand times in cases of endocarditis, that

the left side was almost exclusively the seat of this disease. It has been said that, in rheumatism, the blood is loaded with an excess of fibrin; and the patches or shreds of fibrin found on the mitral valves, in cases of heart-disease following rheumatism, are regarded by some pathologists, not as exudations consequent upon inflammation of the valves, but simply as deposits of fibrin from the blood, overcharged with this constituent.

Stated Meeting, June 1, 1852.

Dr. Wood, President, in the chair.

Present, forty-three members.

The following gentlemen were duly admitted as Fellows: Joseph Hopkinson, M. D., William H. Hooper, M. D., Owen Jones Wister, M. D., F. W. Sargent, M. D.

The Treasurer presented his annual statement, which together with his vouchers was referred to the Censors.

The Library Committee acknowledged the receipt of a copy of the second edition of "Obstetrics: the Science and the Art, by Charles D. Meigs, M. D." From the author.

The President appointed as *Library Committee*—Francis West, Henry Pepper, John J. Reese.

Committee on Meteorology and Epidemics.—W. S. W. Ruschenberger.

Dr. W. L. Atlee was appointed to read before the College biographical notice of its deceased Fellow, Dr. William R. Grant.

Dr. F. G. SMITH read the following

MEMOIR OF DR. JOSHUA M. WALLACE, DECEASED.

In presenting to the College a brief memoir of another of its departed Fellows, the writer does not propose to eulogize the dead: that, surely, were uncalled for here, in the midst of so many in whose hearts is enshrined the warmest tribute that a long experience of his worth could demand. His desire is to put on record, in behalf of his associates, their appreciation of the loss they have sustained, and to offer to those who survive a slight memento of the peculiar traits of character, the professional accomplishments, the principal events in his too short career; in a word, the various means by which he was enabled to secure, in so eminent a degree, the regard and confidence of all who knew him, and to attain, in the spring-time of his life, so enviable a position in the community as a teacher, a practitioner, and a man of many friends. It is with this desire that the writer has accepted the sad duty devolved upon him by his fellows, happy in being thus associated by them with the memory of a valued friend, and yet, at every step, reminded of the difficulty of doing justice to so fruitful a theme.

JOSHUA MADDOX WALLACE, the second son of *Joshua Maddox, and Sarah Coxe Wallace*, was born in Philadelphia, January, 1815, where the earlier years of his life were spent. Shortly after his father's death, which occurred when the subject of this memoir was only six years old, the surviving members of his family removed to Burlington, N. J., where they remained until Joshua was fifteen years old, he meanwhile attending the well-known school of John Gummere, at that place. In the spring of 1830, they again removed, to Princeton, in the same State, where Joshua, with his elder brother William (since deceased), entered the Freshman Class of Princeton College. In this institution he completed the full course of studies, and graduated in arts in 1833, having received the third honor of his class.

Having selected the profession of medicine as his means of support, he enrolled himself as the private pupil of Dr. Samuel L. Howell, Professor of Anatomy and Physiology in Princeton College, to whom his frankness and manliness of character soon greatly endeared him. Our deceased friend could not have commenced the study of medicine under better auspices than those of his pre-

ceptor at Princeton. Dr. Howell was distinguished not only as a popular professor, and an earnest teacher of medicine, but as a gentleman of refined tastes and accomplishments, as well as remarkable urbanity. He was a favorite pupil and intimate friend of the late Dr. Hartshorne, and, like the latter, gifted with no ordinary powers of observation and independent induction, which a very large practice enabled him to exercise with a devotion to his profession not less characteristic than it had been in his veteran instructor. It is fair to presume that the subject of this memoir owed much of the practical bent of his mind, and of his subsequent peculiar acquirements, to the lessons of such a tutor, and to the impressions made at the very outset of his career in an office which was not only a laboratory and library amply furnished with all the ordinary machinery for the instruction of a superior class of students in all the branches of medical science, but a well-frequented dispensary in which all the minor operations in surgery, medicine, and pharmacy, were of everyday occurrence. Dr. Wallace not only enjoyed the advantages of witnessing and aiding in the ministrations of his preceptor in the office and at the bedside, but he became his assistant in the dissecting-room as his demonstrator of anatomy.

After one year's active participation in these varied instructions he matriculated and attended his first course of lectures, at the University of Pennsylvania, in the session of 1834. In the following spring he was examined by the Medical Board of the Philadelphia Hospital, for the position of house physician, in which capacity he remained for one year, during which time he attended his second course of lectures and graduated at the University of Pennsylvania in the spring of 1836.

In the early part of the same year he was elected resident physician to the Pennsylvania Hospital, in which institution he served two years, at the expiration of which time, after receiving the privileges of the hospital practice and library, he established himself in practice in this city. It were needless for the writer to tell how rapidly he won the affection and confidence of many of the most eminent of the profession. Among them all, however, none was more interested in him than our late lamented Fellow, Dr. Jacob Randolph, who was constantly in the habit of intrusting patients to his care, both before and after important

operations, and with his characteristic generosity sharing whatever emolument and reputation his high position and consummate skill enabled him to attain.

In the year 1840, Dr. Wallace was associated with Dr. Goddard, as Assistant Demonstrator in the dissecting-rooms of the University of Pennsylvania, and subsequently he became the assistant of the present professor of surgery in Jefferson Medical College.

In the year 1843, under the impression that the summer months might be profitably employed by students of medicine in attendance upon lectures, he originated the Philadelphia Association for Medical Instruction. In this association he held for seven years the lectureship on surgery, during which time his ample fund of hospital experience, as well as his facility of expressing himself in clear and forcible language, added greatly to the success of the school.

In the year 1847, his personal and professional prospects were both most happily improved by his marriage with the second daughter of Dr. Wm. Shippen, of this city. The three children, who were the offspring of this union, still survive, with their widowed mother, to lament the bereavement which none but they can know and feel in all its depth and strength.

His rapid professional advance now became so certain that, in 1849, finding himself embarrassed by a large and wide-spreading practice, he resigned his lectureship, carrying with him the affectionate regret and esteem of all who knew him.

In the year 1846, he was elected a Fellow of this College, where, although he seldom addressed his associates, his remarks were always characterized by sound judgment, pointedness, and common sense. His reputation as a surgeon was by this time well established. He had performed several capital operations with success upon his own patients and those of his medical friends, and was just taking a prominent position as a consulting surgeon, when he was suddenly arrested by the hand of disease, this time destined to be the conqueror of one who had so often warded off the mortal shaft from others.

Although of a large and apparently robust frame, he often suffered from the exposure incident to his profession; indeed, his last illness (a pleuro-pneumonia) was induced by riding on a bleak day to the confines of one of the districts in the discharge of his professional duties. His sickness was of short duration, it terminated

in rapid effusion, under which he sunk and died on Monday, Nov. 10, 1852, in the thirty-seventh year of his age.

Such is a faint outline of the not eventful life of our deceased Fellow, who, although he achieved no very brilliant results during his brief span, has left much as an incentive and example to those who survive him.

Belonging to a profession distinguished for its extended sympathies and intelligence, he occupied a high place amongst those most noted for these estimable qualities. But in addition to these he possessed a warmth and generosity of disposition, and a manliness and truthfulness in his relations to his Fellows, that no mere professional training could ever have given him. Of him, it could with truth be said, "none knew him but to love him," and yet from his peculiarly unobtrusive temperament few men have been so well and yet so little known. None but those who have received his kindly ministrations in their hours of sickness and distress can tell of his patient sympathizing attentions, his almost feminine gentleness, his apparently instinctive perception of their unuttered wants. None but those can know the loss that the community has suffered in his death. Of strong natural powers, of a frank and approachable demeanor, having just and accurate perceptive powers, an intuitive judgment, together with a retentive memory and great promptness of action, he seemed born for the medical profession, and destined to attain the very highest place in her gift. Even in early life the same traits of character manifested themselves; for when reverses came upon his family, and he was left with a widowed mother and younger brother, he labored for their support, and was enabled, by devoting his leisure moments to the cultivation of a plot of ground, to save the expense of a hired laborer, and to keep his family supplied with garden produce. Such traits as these were but the foreshadowings of that independence and manly self-reliance that shone so brightly in his after years, and which so exalted and beautified every other personal attribute.

In his social relations few could excel him; endowed by nature with a ready command of language, and with a mind capable of comprehending almost any subject, there was scarcely a topic of conversation on which he could not shed light, while his pleasantry and wit made sunshine wherever he went.

As a teacher he was noted for the clear and forcible manner in which his instructions were conveyed, and for the practical bearing of all that he set before his class. He never seemed to be at fault, but was always ready to produce from the stores of his memory something adapted to the case before them. Even in his last moments, when the delirium and restlessness of approaching death were upon him, a question addressed to him upon some point of practice would instantly rally his wandering intelligence and cause the flickering flame to burn up steadily, while the reply would be characterized by the same clearness of expression and justness of detail that marked his best days.

As a writer he was but little known, some fugitive reports of cases and an occasional review were all that he contributed to the press, if we except the excellent clinical reports made during and after his residence in the Pennsylvania Hospital, and his statistics of fractures; which, we may observe in passing, were models of their kind, every word aptly chosen, and the whole characterized by terseness and classical expression.

As a practitioner he was eminently successful, not only in the administration of his remedies and the fertility of his resources, but in the faculty of inspiring confidence wherever he went by his intuitive perception of the nature of the case and the unwavering decision with which his resources were applied. To these traits all who knew him will bear witness, and those who had professional intercourse with him will remember with what clearness his diagnosis was presented, and with what logical sequence the indications for treatment were pointed out.

In following our lamented associate through the different stages of his progress as we have thus briefly detailed them, from the epoch of his Princeton life when as a college student he worked in his mother's garden whilst aiming at the highest honors of his class, and then leaving the recitations of the academy only to win the golden opinions of his new associates by the zeal and industry which distinguished him in the medical office and dissecting-room, next as house pupil in the wards of the Blockley Almshouse, then a resident at the Pennsylvania Hospital, and, subsequently, as coadjutor to Dr. Randolph, and assistant to Dr. Mütter, as public and private teacher, and last as Fellow of this College in the full tide of a growing reputation and prosperous practice: in thus reviewing step

after step of his career, we are especially struck with the practical and efficient character of his whole professional life. From first to last his work was in the field. He began, while yet a tyro, as pharmaceutist, demonstrator, and clinical assistant to a country professor, continued his studies as resident successively in two of the largest city hospitals, and finally made his way into an excellent practice and high position as a teacher while assisting his seniors who had preceded him in the same struggle for advancement. Need we offer a better example or a more encouraging illustration of the natural result of such a course of training, acting and reacting on the sagacious and energetic spirit which so happily existed in the present instance: does it not show that "nothing is impossible to him that wills?" The influences under which Dr. Wallace grew and prospered, not less than the instinctive habits of his mind, were not such as to incline him to dwell upon mere matter of speculative inquiry, or to search for truth in any direction not intimately connected with positive demonstration, but no man was more ready or able to seize upon a really available fact or observation, and to make the most of it in the treatment of disease or injury. This faculty it was, under the influence of his peculiar training, that secured to our associate his marked success in practice; and we further believe that it was rapidly preparing him under the same influences to take his place among the first surgeons of the country. We deplore his untimely death, therefore, not only as a severe affliction to his very numerous friends, and a loss to this College, but as a misfortune to the whole profession.

Dr. JOHN BELL read the following *Abstract of M. de Watteville's Report on the Statistics of the French Hospitals and Almshouses for* 1847.*

STATISTICS OF THE HOSPITALS AND ALMSHOUSES OF FRANCE FOR 1847.

There are 1270 institutions in France for the reception and treatment of the sick, the aged, the infirm, and orphans and foundlings, governed by 1133 administrative boards or commissions. Of these last 38 have no suitable building, and are

* Annuaire de l'Économie Politique et de la Statistique. Pour 1852.

obliged to have the sick, who apply, treated at the houses of these latter.

Of *hospitals* proper there are 377; of *hospices* or *almshouses*, and orphan and foundling hospitals 199; while the number of those of a mixed character in which the two are blended is 734.

Preparatory Schools of Medicine to the number of 20, with courses of *Midwifery*, are attached to the hospitals. Twenty-two hospital boards have, in addition, organized courses of Midwifery in the institutions committed to their charge.

Revenue.—The revenue of the hospitals and hospices, simple and mixed, of France in 1847, was 54,116,660 francs, or about 10,823,000 dollars; of which, 4,890,000 (dollars) was from fixed or stated income; and three millions and a quarter (dollars) was from fluctuating sources; and $2,690,000, from special allotments by the departments, the board of certain patients, of hospital pupils, of soldiers and sailors, and of foundlings.

Expenses.—The expenses of all the hospital establishments in France for 1847, were 51,900,000 francs, or about 10,380,000 dollars, leaving a balance on the side of income of 443,400 dollars.

The cost of the food of the patients and poor inmates of the hospital institutions of different kinds was, for 1847, $4,438,000, of which $1,915,000, nearly two millions of dollars, were spent on bread, $1,114,000 on meat, $500,000 for wine, beer, and cider; $780,000 on various edibles; and $122,000 on minor objects of consumption.

The salaries to the physicians and surgeons of the hospitals &c., were $163,000; the different officers (*employés*) $377,000; to the attendant nuns or sisters of charity, $185,000; the wages of the nurses and servants, were $272,000; commissions on collections, $150,000.

The cost of food was $\frac{1}{2}\frac{1}{1}$ of all the expenses; and that for the purchase of wheat or bread amounted to $\frac{3}{4}$ of this sum. In one department alone, that of Corsica, did the cost of meat exceed that of bread.

Number of Beds in the Hospitals and Hospices.—In addition to the classes already mentioned as receiving the benefits of these institutions we must mention the insane poor. The proportionate number of beds for the individuals of each sex, and for children,

as also for those who pay their board, and the military, is as follows:—

	Hospitals	Hospices	The Insane	Total
Men . .	19,745	17,584	3,019	40,348
Women .	19,371	22,796	3,830	45,997
Children .	5,099	41,969	121	47,189
Boarders .	2,323	2,703	883	5,909
Soldiers .	16,699			16,699
Total . .	63,237	55,652	7,853	126,142

The deduction of 16,699 beds for the military, or more than a fourth of the whole number, exhibits a fearful disproportion of this class to the rest of the inhabitants of France, and of itself gives a good idea of the immense drain on the treasury and resources of the nation for the support of its army.

There is a disproportion, also, pointed out in the Report, in the number of beds reserved for old persons and children, who, with few exceptions, can be nursed and attended to much better at their own homes. It is estimated that one bed will, on an average, accommodate eight persons, in succession, in the course of the year. It is well remarked, in the article from which I am now drawing, "How great the service rendered to society, by which the head of a family is enabled to recover his health, to resume his work, and to provide for the wants of his family. It is giving to many while relieving one."

In 1847, the number of persons received in the hospitals in France, amounted to 486,083, viz.:—

Men	206,201
Women	139,616
Children	35,023
Poor persons attended gratuitously .	380,840
Poor who paid their board . . .	17,843
	398,683
Soldiers	87,400
	486,083

In the *hospices* for the same period, 77,053 received an asylum, viz. :—

Men	21,239
Women	28,434
Children (orphans and foundlings)	24,176
Paid their board	3,204
	77,053

There were also received, either in asylums destined for their reception, or in provisional retreats, 12,087 insane, viz. :—

Men	4,974
Women	5,510
Children	167
Paying board	1,436

The whole number of persons received in the hospital institutions for the year 1847 in France, was 575,223. The beds for their reception were 126,142.

The number of women received into the French hospitals is much smaller than that of the men. In the hospices the proportion is reversed. M. de Watteville, author of the Report from which I borrow these details, deplores the neglect of poor children, who are either denied admission into the hospitals, or, if received, are put into the same wards with adults, and are thus exposed to both physical and moral contagion.

The number of soldiers received into the hospitals in 1847 was beyond all measure out of proportion to the number of the French army, which amounted to 300,000. Now as the admissions were 87,400 in the civil, and 63,000 in the military hospitals, making together 150,000, there must have been 1 out of every 2 of the entire army received into the hospitals, during, be it remembered, a period of peace, and among men in the prime and vigor of their life. Even were we to suppose that the hospitals had been largely recruited by soldiers returned from Algeria on the sick list, it would still be impossible for us not to believe that many were received without adequate cause.

Average Stay of a Patient in the Hospital.—For men it is 48

days, for women 64, for children 70; for the insane during the preliminary period 71, the period of treatment 260 days, or between 8 and 9 months.

Cost per Diem of a Patient in the Hospital.—For a man, 22 cents;* for a woman, 21 cents; for a child, 37 cents.

Mean Mortality. Among the men it is 1 in 15; among the women 1 in 12; among the children, 1 in 16. Surprising differences are met with in the hospital mortality in different departments of France. Thus, while in Aveyron it is 1 for every 2 men; 1 in 5 women in Upper Vienne, and 1 in 2 children in Gard, it is only 1 in 48 men in Loire; 1 in 38 women in Upper Loire, and 1 in 156 children in the same department.

The number of physicians in attendance on the hospitals and hospices, &c., of France, is 1,552, and of surgeons 615. Their number might, M. de Watteville thinks, be increased with great advantage to the hospital patients.

On the other hand, he believes that the corps of superintendents, nurses, and servants might be very properly reduced.

Dr. PARRISH presented, for the inspection of the Fellows, a portion of cuticle several inches in diameter, which had separated from the body of a patient after recovery from an attack of scarlatina.

Dr. NEILL read the following—

OPERATION OF TRACHEOTOMY IN AN EPILEPTIC.

The views of Marshall Hall, which have lately appeared in the English journals upon the subject of epilepsy, have probably fallen under the notice of most of the Fellows of the College.

Every investigation of a malady so distressing, and of which so little has been known of its pathology, must be hailed with pleasure by every practitioner of medicine. Especially will this be so, when so high an authority upon affections of the nervous system advances views not only as to the nature of the disease, but also practical deductions of the highest importance.

Dr. Marshall Hall says: "This question of the application of

* The franc is rated here at 20 cents. It is sometimes valued at 18 cents.

tracheotomy in the preventive treatment of epileptic convulsion, is one involving high principles in physiology.

"As I have stated, I believe few will hesitate to perform the operation of tracheotomy, as the present remedy, when there is, from apoplectic laryngismus, imminent danger to life. But the question remains—are we justified in performing this operation in cases of epilectic and other convulsions, as a preventive of future evil? Are the somewhat remoter danger to mind, and limb, and life, and the hope that whilst the faculties are spared the patient may be rescued from the susceptibility to the attacks, the *dignus vindice nodus*, a sufficient motive for adopting this measure in its more continuous mode of a tube worn in the trachea. After having witnessed the dire circumstances and effects of the frightful maladies more than any man, of epilepsy especially, I unhesitatingly say, yes! I regard the melancholy condition of the patient as justifying the heroic remedy. The case may be violent and frightful *in any degree*. In what precise case tracheotomy is justifiable I do not pretend to determine. It is a matter of pure *moral* calculation and choice in regard to the terrors of the malady on one hand, and of the remedy on the other. Epilepsy may occur in the slightest form of mere transient oblivion, and it may occur in the gravest form of sudden and violent convulsion, dashing the patient to the ground, into the fire, or into the water, and followed by coma or apoplexy, delirium or mania, paralysis, amentia.

"The former of these attacks may be designated the *epilepsia mitior*. It comprises all that is short of laryngismus, affections of the senses, as muscæ, tinnitus, the odor of musk, aura, vertigo, oblivion, confusion, loss of consciousness, nutatio, falling, various spasmodic affections of the face, the eyes, the extremities.

Then comes laryngismus, laryngeal dyspnœa, perhaps perfect closure of the larynx, with violent efforts of expiration. This with all the other links of the dreadful chain constitute the *epilepsia gravior;* all that is on *this* side of the laryngismus must be unaffected by the operation of tracheotomy; all that is on *that* side of this laryngismus will, I trust and believe, be prevented by its efficient institution. By tracheotomy, the *epilepsia gravior* or the 'grand mal,' is converted into the *epilepsia mitior*, or the 'petit mal.' If this, my hope, be realized, I shall deem the event a great victory achieved by physiology or theory over mere observation, and espe-

cially by that of the diastaltic nervous system, of which it is an application.

"I may now observe, in conclusion, that I have on several occasions stated that, if tracheotomy were performed, and a tube worn in the trachea, the epileptic, the puerperal, or the infantile convulsion would be prevented, with its dire effects."

In accordance with these views I operated upon a patient of Dr. Shelmerdine, in Spring Garden, under whose care he had been for about one year, and who had tried all the ordinary modes of treatment. The following are the particulars of his case:—

John Blume, aged twenty-nine, of five feet eleven inches in height, and weight about one hundred and sixty pounds. His appearance was healthy, and he had no deformity of the throat.

His first fit occurred nine years ago, and was not referable to any particular cause by his family. He was not subject to them in childhood, although his brother had died of epilepsy.

The frequency of the paroxysms gradually increased, and for the last year he has been unable to attend to any business.

His mind has been so affected by the disease that he has frequently mistaken his way home, and often gone into the neighbors' houses for his own.

His mother and wife informed me that during the last six months he would have an attack at least every other day, but occasionally would have as many as fifteen or twenty during the day.

Life had become a burden to him, and he feared to leave his home.

His physician tells me that on the first occasion of his being called to him, he was laboring under most severe congestion of the face and neck, producing great lividity and complete insensibility; and that, in all of the subsequent attacks, difficulty of breathing seemed to be prominent.

The patient himself remarked to me that, immediately preceding his attacks, he frequently experienced a sense of constriction about his windpipe; and his friends and family confirmed the idea, that the severity of the attack was proportionate to the difficulty of breathing.

When the operation was proposed, and its nature explained to him, he was anxious for its performance, and had great expectations of its relieving him.

The operation was performed on the 11th of March last, in the presence of Drs. Shelmerdine, Marshall Paul, and Hollingsworth.

His neck was long and well adapted for the operation. The incisions were made in the usual way, and the only points worthy of remark were—that the sterno-hyoid muscles, from frequent spasmodic contractions, were thicker than usual; and that the isthmus of the thyroid gland was so large and broad as to cover the first three rings of the trachea.

The hemorrhage was not so troublesome as might have been expected; care was taken to tie the inferior thyroid vein, and no irregular artery was met with after the trachea was exposed. A piece of about three lines in breadth was removed from the middle of the fourth ring of the trachea, and the fifth ring also was divided in order to accommodate more accurately the tube which had been provided, which was of the ordinary form of the instrument shops.

The introduction of the tube produced but little irritation and coughing, his voice was not in the least affected; but the trachea was smaller than usual, and the wound becoming so very deep after the division, that I had constructed tubes of various angles and length corresponding with the depth of the wound. (Specimens of the tubes were exhibited to the College.)

He slept but little the first few nights after the operation, and seemed unwilling at first to trust himself in a recumbent position; but as the wound healed around the tube he became comfortable, and had nothing like a return of his complaint until the *thirteenth* day after the operation, which tendency to an attack he attributed to his removal of the tube; he had taken a slight cold, which made the tube disagreeable on that day, and he thought he would risk the night without it. The spasm was slight, and he did not lose his consciousness. About *two weeks* after this he was threatened with an attack of which he was conscious, and mentioned the fact to his mother, who immediately removed a temporary plug which he introduced in the orifice of his tube to prevent a whistling noise accompanying respiratory movements. Upon the removal of the plug the symptoms disappeared, his breathing was comfortable, and he felt much encouraged. He began to appreciate the object of the operation, and fully believed that the means to mitigate the

severity of his attacks was the removal of the plug, and that the disease was under his own control.

He made arrangements to renew his business, walked about the streets in the confidence and consciousness of a strength of mind and purpose which he had not experienced for a long period.

Unfortunately for him, however, he was again seized on the evening of the 2d of May, with symptoms of another attack. His physician was sent for, who removed the tube and cleansed it; after it was replaced the patient felt easier, but was not completely relieved. In the middle of the night he had a most violent attack, and died almost instantaneously. His physician was not with him when he died, and the family would not permit a *post-mortem* examination of any part of his body but his throat. Dr. Shelmerdine merely examined the cicatrix around the wound and the trachea. The parts had consolidated around the tube, and the trachea was perfectly healthy.

I report this case to the College in order that they may form their own judgment upon the theory and the treatment of Marshall Hall. Few cases have as yet been reported where this operation has been performed, and I believe that this is the first case in this country in which the trachea has been opened, and a tube worn, in order to mitigate, if not prevent, attacks of epilepsy.

And, although this patient died, I still think favorably of the operation, and under the same circumstances would perform it again. His death was in no way attributable to the operation, and had not the operation been performed it might have occurred at a still earlier period. I regard the mitigation of the attacks with which he was once threatened, and moderation of the symptoms, as more satisfactory than if there had been no approach of an attack, for then the entire absence of the complaint might have been attributed to the shock made upon the system by the operation; and this operation would have demonstrated nothing more than tying the carotid artery, after which, and other violent shocks, patients have been free from attacks for a long period.

Dr. HAYS remarked that a case of epilepsy had fallen under his notice, which, though it threw no additional light upon the pathology or treatment of that disease, was curious in many respects, and in

which the patient was cured by a novel operation performed by himself.

A gentleman, about twenty-eight years of age, came to Philadelphia in order to place himself under the care of Dr. Hays, for the purpose of being operated on for cataract. The patient was affected with epilepsy, and his general health not being good, Dr. H. did not consider it proper to perform the operation until he was restored to a better condition. The epilepsy in this case was the result of masturbation, to which practice the patient acknowledged he had been addicted for many years. Dr. H. insisted upon the necessity of his abandoning it entirely: the patient promised that he would; and so long as he abstained his epileptic seizures were less violent and frequent, but, on his again giving himself up to the indulgence, they recurred with their former severity. He was, at one time, for three months free from an attack. Dr. Hays now operated upon the diseased eye, but the excitement of the operation induced an epileptic fit, and the day after he had from forty to fifty in quick succession. The brain became affected, and in the paroxysms of the mania which ensued he abandoned himself to masturbation, even before his nurse. On being put under restraint he got considerably better. His mental derangement recurred at intervals for about eighteen months. Three years last, April, after mumerous seizures within a few days, he became exceedingly violent, indeed, a raving maniac, and whilst in this state he jumped from a three story window and struck upon a fence, in consequence of which he was very severely bruised. He, however, finally recovered from the injuries thus inflicted, and from that time up to the present, a period of three years, he has not had a single epileptic attack.

It was stated in one of the medical journals, some years ago, that an epileptic patient accidentally fell into the fire and burnt himself severely; the result being an entire suspension of the epileptic fits. This plan of cure will not, however, always succeed. Dr. Hays was called to a lady, about twenty-two years of age, who had for many years been subject to epilepsy, sitting one day by a coal grate, a fit seized her, during which she fell on the grate and was so severely burnt that she died at the end of ten or twelve days. Between the accident and her death she had repeated attacks of epilepsy.

Dr. CHARLES D. MEIGS made some remarks on the pathology of Childbed Fever, principally with the view of disproving the contagiousness of the disease.

The amendments to the Ordinances proposed at the meetings of March 2, and April 6, 1852, were unanimously adopted.

Two propositions (37 and 38) for Fellowship were presented.

Stated Meeting, July 6, 1852.

DR. WOOD, President, in the chair.

Present, thirty-one members.

Drs. THOMAS HEWSON BACHE, and JAMES V. EMLEN, were duly admitted Fellows.

Dr. WOOD presented to the Library a copy of the third edition of his "Treatise on the Practice of Medicine."

The Censors reported that they had examined the books of the Treasurer, with his vouchers, and found the same correct.

Dr. WEST, on behalf of the Library Committee, presented its annual report as follows:—

In presenting their annual report, the Library Committee have nothing of special moment or interest to communicate to the College.

During the past year they have had all the periodicals and pamphlets belonging to the College appropriately bound into volumes, numbering in all nearly one hundred, which have materially contributed to the extension and value of the library.

In this way, and by the donation of original works, and the valuable reprints received from the Sydenham Society of London, the library has so much increased in size as to be likely to demand before long additional cases for its accommodation. To meet such

a contingency, a resolution was recently passed by the College, authorizing the Library Committee to procure such cases so soon as they shall deem the same necessary. In this connection, the committee would suggest a difficulty they apprehend in carrying out this resolution. The capacity of the present chamber, even for the accommodation of the meetings of the College, is so very limited that serious inconvenience is anticipated whenever it shall become necessary, as it will be very shortly, still further to diminish its size by the erection of additional bookcases. Although not, perhaps, within the strict line of their official duties, the committee will be excused, perhaps, for pressing the necessity of additional room for the accommodation of the library upon the attention of the Fellows, as a strong inducement to urge the consummation of the important movement, which has been in progress for some time past, for the collection of a fund adequate to the erection of a hall suitable for the use of the College.

Since the appointment of a Librarian, the Library Committee have not been charged with the duty of giving out the books when applied for, and are, therefore, unable to state the degree of use, either positively or comparatively, which is now made of the library; but they believe that the privilege is more appreciated and enjoyed than formerly.

The following were elected Officers of the College for the ensuing twelve months:—

President.—GEORGE B. WOOD, M.D.

Vice-President.—CHARLES D. MEIGS, M.D.

Censors.—HENRY BOND, M.D., J. WILSON MOORE, M.D., SAMUEL JACKSON, M.D., GEORGE W. NORRIS, M.D.

Secretary.—D. FRANCIS CONDIE, M.D.

Treasurer.—J. RODMAN PAUL, M.D.

Curator.—JOHN NEILL, M.D.

Dr. BEESLEY made the following communication:—

In the report of the remarks made by me in relation to the metallic funnel-shaped tampon, at the meeting of the College in the third month (March) last, I am made to say that I had found that instrument to answer admirably for arresting hemorrhages from

the uterus, whether occurring *subsequently to delivery* or from a diseased condition of the organ.

I should not have noticed this mistake did it not involve malpractice of a serious character, that of retaining the uterine discharges in the vagina and uterus after delivery, when of course these organs may be easily dilated and internal flooding increased in proportion. Subsequent to delivery firm uterine contraction is needed; to obtain which, at times, the safety of our patient requires the prompt removal of the delicate tampon formed by coagula in the vagina and uterus.

The cases in which I have found the metallic tampon especially useful are those where the uterus is firm and the cavity to be filled small; as in menorrhagias, uterine hemorrhages, in the impregnated or unimpregnated state, and (by its early and continued application during the progress of abortions) to save the gradual or sudden loss of blood, which not unfrequently reduces a woman greatly before the expulsion of the child and placenta.

The facility with which it may be withdrawn and reapplied by the patient is an important matter, as it allows her to attend to the calls of nature without the aid of the medical attendant, or promptly to apply the tampon in case of too free a discharge suddenly appearing in the absence of the physician. With this instrument, I am persuaded, such a case need not occur as is related in a late work on "*Females and their Diseases*," where a young girl was allowed to flood excessively rather than shock her sense of delicacy by the introduction of the usual tampon. The mother or nurse, with a little instruction, could with ease apply it by tying the horizontal portion of a T bandage, about four inches broad, around the body above the hips, and bringing the vertical part between the limbs to loop through it in front, so as to press firmly a folded napkin or thick compress against the tampon previously introduced into the vulva, which may thus be readily put on the stretch, and the hemorrhage effectually restrained with a very moderate pressure and without pain.

I have been accustomed to use one of three sizes, according to the condition of the vulva. The smallest being sufficiently large, unless there is considerable relaxation of the soft parts.

This tampon may be described as an oval funnel; the small extremity rounded and closed, one and three-fourths of an inch in

circumference, and five-eighths of an inch long, to pass into the vagina. The diameters of the open oval part are for the smallest or first size, short 2¼ inches; long 3 inches. Second size, short 2⅝ inches; long 3¼ inches. Third size, short 2¾ inches; long 3⅞ inches. The depth of the funnel is 1¾ inches for the two shorter, and 2¼ inches for the largest. The instrument being moulded of the largest size, may be readily cut down to smaller dimensions.

Dr. PARRISH read the following:—

PECULIAR FORM OF DISEASE OF THE CORNEA, FOLLOWING VARIOLA AND RUBEOLA.

The prevalence of eruptive complaints, during the past winter, has given rise to a number of cases of severe disease of the cornea, resulting sometimes in entire loss of vision in the affected eye, and appearing to require for their relief a modification of the ordinary methods of treating this class of diseases. During a term of service at the Wills Hospital, 8 cases of this description presented themselves; 6 from variola, and two from Measles, besides several others which were treated out of the Institution by the resident physician, Dr. James S. Green. Through the kindness of Dr. Green, I am enabled to present notes of the cases which were treated at the Hospital, but, before proceeding to detail them, I will make a few observations upon the form of disease which they serve to illustrate.

At the decline of the eruption of smallpox or varioloid, and sometimes after the eruption has scaled and the patient is regarded as convalescent, a little speck appears upon the cornea, attended with injection of the conjunctival vessels, intolerance of light, and lachrymation to a greater or less extent.

This diseased point is strongly characterized by a tendency to spread over the cornea. As it progresses, its edges assume an irregular form, and are tipped by a yellowish deposit; in some cases, this deposit inserts itself under the layers of the cornea, and gradually undermines the structure, producing softening and degeneration of the tissue as it advances. If the disease is not arrested by appropriate means, the whole cornea becomes implicated, and either perforation of some point in its surface, or permanent opacity without perforation, is the result.

One of the first cases of this kind which fell under my notice,

was in the summer of 1851, in the person of a gentleman of this city, aged about 35 years, who had suffered from a severe attack of varioloid. About the twelfth day after the appearance of the eruption, and while the scabs were being thrown off, a small round transparent spot was observed at the outer edge of the cornea, attended with a strong aversion to light, and with injection of the surrounding vessels. Various astringent and emollient applications were directed by Dr. H. Hart, the attending physician, without affording any relief to the eye. Mercury in small doses was now administered, and leeches were directed to the temple of the affected side. Still, the ulcer spread, the pain and intolerance of light increased, and the constitution of the patient became irritable and febrile. He could not sleep at night, and suffered from confinement.

At this stage of the disease, I was requested to visit him. The ulcer had now extended somewhat beyond its original limits, but still involved only the outer portion of the cornea, the pupil remaining free; its surface was transparent, and the edge defined, except at the point of junction between the sclerotic coat and cornea, where it had begun to deepen, and presented a yellow, irregular line. From the position and form of the ulcer no apprehension was excited of its encroaching upon the central part of the cornea and interfering with vision, and had it occurred under other circumstances, the prognosis would have been decidedly favorable.

A perseverance in the same plan of treatment was recommended, viz.: small doses of blue mass and opium, given several times during the day, with a 4 gr. solution of nitrate of silver dropped upon the eye every morning.

It was soon manifest, however, that the diseased surface was extending, and that the yellowish deposit which commenced at its outer edge was gradually filling up the transparent portion, and producing softening and degeneration of the cornea as it advanced.

The nitrate of silver solution was increased to the strength of 8 grains, and was applied directly to the diseased surface by a camel-hair pencil, and the hydriodate of potassa, grs. v., three times daily, was substituted for the mercury. Good diet was allowed, though, from the great intolerance of light, the patient confined himself strictly to a darkened room. This course of treatment was continued for a considerable time without the slightest

amendment. The yellowish deposit gradually passed over from the outer to the inner edge of the ulcer, and finally began to encroach upon the surrounding parts until the boundaries of the original ulcer were lost; and a yellow line extended vertically across the cornea in front of the pupil. The patient was now placed upon quinine and a more generous diet, and the vinum opii was substituted for the nitrate of silver solution, but the process of softening of the superficial layers of the cornea gradually progressed, its limits being marked by the advance of the yellow line just referred to.

Dr. Littell was associated in the consultation, and concurred in the steady pursuance of a course of tonic treatment, with the addition of exercise in the open air.

Notwithstanding all our efforts, however, the process of softening slowly went on, until it covered the eye, and destroyed its vision, without, however, affecting the form of the organ.

The irritability of the eye, and the vascular turgescence, continued until the vigor of the constitution was re-established by good food, travelling, bathing, &c., and the health of the patient has since been good, though the cornea is covered by a deep nebula.

Dr. Littell informed me, that a case very similar to the above occurred to him, in a clergyman of this city, in which the transparency of the cornea was lost by the gradual extension of an ulcer or pustule with yellow deposit on its edges, occurring several weeks after an attack of varioloid, and when all apprehension of any farther trouble had passed. In this instance, tonics, a good diet, and exercise in the open air relieved the irritability of the eye, and seemed to arrest the tendency in the ulcer to spread.

The form of disease here described is different from the pustule which occurs upon the eye in the height of the eruption of small-pox, and which oftentimes destroys the sight by penetrating the cornea, and letting out the humors. It is a secondary affection, having, as I believe, none of the characters of the pustule, nor yet of the ordinary forms of ulcer of the cornea. It is not elevated above the surface like a pustule, nor has it, in all cases, the distinct pitting and the regular outline of an ulcer. The mode of spreading, too, is different from that of ordinary ulcers of the cornea. A yellow vertical line marks its advance towards the pupil, the layers of the cornea softening as this line proceeds, leaving the parts over which it has passed opaque. In the cases which I have seen, the

tendency to deepen and penetrate has not appeared, nor has there been a circular and defined edge to the diseased surface.

It has, indeed, appeared like a gradual softening and degeneration of the superficial layers of the cornea, with a marked tendency to spread, as in sloughing, or, perhaps, it is more nearly allied to the process of desquamation of the cuticle which occurs after some eruptive complaints, or to the throwing off of the nails and hair, after protracted or low forms of fever.

This form of disease has received less attention from the writers on diseases of the eye than its importance would seem to demand. It is mentioned by Frederick Tyrell, as a very rare disease in general practice, he having seen but one case in the early stage. This was the case of a boy, in which an ophthalmia set in on the fourteenth day after the appearance of the eruption of smallpox, and pursued very much the same course as that described in the cases here narrated; terminating in permanent opacity of more than one-third of the cornea.

This sagacious writer remarks upon this case: "I have not seen sufficient of this form of disease to satisfy myself whether the destruction of the cornea takes place by ulceration, or by a succession of small sloughs." But in either case, he remarks, the destruction of the cornea indicates a want of power, and shows that the case is asthenic. In correspondence with this idea, Tyrell recommends a tonic course of treatment from the first, with good diet, and the adoption of every means to increase the general power. He also discourages the application to the eye of powerful stimuli, which may excite a degree of action that the part is not able to support, and may thereby increase the sloughing.

This advice cannot be too highly commended; and whatever success may have attended the treatment of the cases which will presently be detailed, is to be attributed to the observance of this rule. It should be remarked here, that allusion is made in Tyrell's work to an essay of Dr. J. F. Mason, of the Smallpox Hospital, of London, on this form of ocular disease, which appeared in the *London Medical Gazette* of May 6, 1839, who is said to be the first to call the attention of the profession to it.

The same disease is described by Wm. Laurence, under the head of "secondary variolous ophthalmia," in a paper in the *London Medical Gazette*. He advocates active antiphlogistic treatment in robust

subjects, and in the early stage, to prevent the spread of the ulceration over the cornea, though if it should occur in a debilitated subject, and the corneal affection should be seen on the state of ulceration spreading from weakness; he admits, that the only chance of benefit will be afforded by generous diet, stimuli, and tonics.

Mackenzie devotes a single page of his voluminous work to this disease under the name of secondary variolous ophthalmia, describing it very much in the same language as Laurence. He recommends tartar emetic, given so as to vomit and purge freely, as productive of the best effects, together with leeches, blisters, &c.; and, in the latter stages, sulphate of quinine, and the undiluted wine of opium as a local application.

I should judge that this writer had seen but little of the affection which it has been my purpose to describe in this article, or he would not have given the authority of his name to this mode of practice.

On the whole, the views advanced by Frederick Tyrell on this, as on most other topics connected with this interesting branch of surgery, appear to me so sound and practical that I cannot but give them a hearty assent. When it is remembered that the cornea is a tissue of low vitality, and that even in a vigorous state of the general system its structure readily yields to the assaults of inflammation, it is easy to understand how it would break down when attacked by a low form of disease, the characteristic feature of which is to spread over its surface; and, to soften its superficial layers, the constitution being at the time enfeebled by previous disease. Under such circumstances the avoidance of all depressing remedies, or of highly stimulating local applications would seem to be clearly indicated, while our attention should be steadily directed to the invigoration of the constitution by appropriate tonic and dietetic means. Local or general depletion, with active doses of purgative medicines, low diet, and confinement in a darkened room, will, I believe, greatly increase the risks of sloughing over the whole surface of the cornea, and consequent permanent opacity, while the steady pursuance of the opposite plan, modified of course to suit the circumstances of each case, will oftentimes prevent it.

As to local applications, we have thought, at the Wills Hospital, that a weak solution of sulph. zinc or cadmium is better adapted to the early stage than the stronger solutions of nitrate of silver.

The vinum opii, where there is much pain or intolerance of light, will also be found useful.

The following cases, drawn up by the resident physician of the hospital, Dr. James S. Green, will give an idea of the general course of symptoms and treatment pursued in the cases which occurred under our observation in the Institution:—

Case I.—Catherine Smith, aged 22 (Irish), was taken sick with variola on December 1, 1851. Had the disease badly, was much pitted. On the 23d of Dec., was able to be about her room. December 27, first noticed her eye to be inflamed, from which time it became worse till she came to the hospital, January 17, 1852. Cornea nearly covered with a yellow deposit, great lachrymation and intolerance. Prescribed hyd. c. c. gr. ij; ext. hyoscyami gr. iij, at bedtime; quinine gr. ij three times a day. Solution zinci sulph. gr. iv; aquæ ʒj applied to the eye every morning.—*January* 20. Less intolerance and pain but no change in cornea; same prescription, excepting hyd. c. cret. and hyoscyam.—*Jan.* 27. Eye much improved, bears light well, and the deposit in the cornea more defined; same prescription.—*Feb.* 3. Improving still, but was admitted into the hospital.—*Feb.* 20. The deposit has become less, and the general health much improved.—*March* 4. Discharged from hospital. The deposit has been nearly absorbed, excepting a small spot at the outer and lower part.

Case II.—Martha Boyd, aged 16 (Penn.). Taken sick with variola.—*Dec.* 28. Had it lightly; not pitted on the face.—*Jan.* 12. Was convalescent when the eye became affected.—*Feb.* 22. Came to hospital with great intolerance and injection of vessels; the whole surface of cornea covered with a yellow deposit, and the cornea a little flattened. Quinine, ferri carb. āā gr. ij, three times a day; solution zinci sulph. gr. iv; aqua ʒj; applied to the eye every morning.—*Feb.* 26. Eye not improved; some circumorbital pain, and more severe at night. Belladonna to the brow, quinine gr. j, cal. one-fourth, four times a day; solution of nitr. argent gr. ij, aq. ʒj applied to the eye.—*March* 3. Eye has become tolerant of light, less injection, but perceptible change in the cornea. Pain still continuing, and ptyalism not effected: the same prescription ordered.—*March* 8. Eye has not so much injection; pain subsided, deposit

assuming a whiter hue. Prescribed quinine et ferrum āā gr. j, three times a day; zinc. s. gr. viij; aq. ℥j.—*March* 10. Eye still improving, but the opacity not lessened in density, though not so yellow. Same prescription.—*March* 13. Less photophobia; no change in the cornea, cad. s. gr. iv; aq. ℥j; ferri et quinine, ungt. hydrarg., oxid. rubr.—*March* 17. Improvement slight; the cornea not so flattened, but no more sight. Less redness and photophobia.—*March* 25. Still improving; same prescription.—*April* 2. Still improving; cornea beginning to clear up at edges. This is the last time patient came to the hospital. It is probable that, in this case, the transparency of a considerable portion of the cornea was permanently lost.

Case III.—Jane Lucas, aged 11 (Irish).—*Jan.* 10. Taken with smallpox; was sick three weeks; had it badly; much pitted. When convalescent, eye became affected, came to hospital February 14, and was admitted. The whole surface of the cornea was covered with yellow deposit, a little flattened. Her health feeble, anemic. For a few days the eye became worse, and there was danger of perforation. Iron and quinine, a full diet, zinc s. iv, aq. ℥j applied once a day, and belladonna to brow.—*Feb.* 26. The eye is less injected; more tolerance of light; no pain; deposit becoming whiter. Ordered iron and quinine gr. j, three times a day, and the same solution of zinci sulph.—*March* 1. Eye still improving; the opacity not so dense. Sclerotica has become healthy. Same prescription. —*March* 25. Eye improving; opacity less dense; same prescription. —*April* 20. Discharged from hospital; some opacity, but still clearing up: ordered to use same prescription. Saw patient May 29. The cornea has become nearly clear; a little misty; a fibrinous deposit at the lower part, not affecting her vision.

Case IV.—Ellen Keller, aged 12 (Phila.). Taken sick with smallpox February 30. Sick three weeks; had it lightly. When convalescent, eye became affected.—*March* 6. Came to the hospital; great photophobia and lachrymation: could not see eye; ordered iron et quinine gr. j; diet; zinc sulph. gr. iv; aq. ℥j, applied every day.—*March* 12. Much better; on examining eye found a deep ulcer, not well defined, filled with yellow deposit, occupying the centre of the cornea. Same prescription ordered. Patient was

admitted into the hospital.—*April* 13. Discharged; the cornea having regained its natural appearance, and the opacity being rapidly absorbed. She was treated throughout with iron and quinine, and a solution of zinc. sulph.

Case V.—Edward Rose, aged 10 (Phila.). Was taken sick *Feb.* 1. Sick two weeks; had it very lightly; not more than six or seven pustules. When convalescent, the eye became affected.—*Feb.* 25. Came to hospital; intense photophobia and lachrymation; impossible to see his eye. Hyd. c. cret. gr. v, at bedtime, syr. rhei ar. in the morning. Iron and quinine and a solution of zinc. sulph. gr. iv; aq. ℥j every day.—*March* 1. Much better; able to see; his eye less injected, and at lower part an ulcer, filled with a yellowish matter, which shades itself into the clear part of the cornea. Ordered hyd. c. c. gr. ij. Iron and quinine solution, zinc. sulph. gr. iv.—*March* 10. Better, although some intolerance of light. The ulcer is more confined to the lower part of the cornea, and the deposit is becoming white. Same prescription, except the hyd. c. creta.—*March* 20. Eye improving, though not rapidly; good deal of intolerance and injection, although cornea looks better. Same prescription.—*March* 27. Eye much better; no intolerance, little injection, and the deposit whiter and defined. Same prescription ordered.—*March* 30. Eye improving. Saw the patient April 7. Eye was better and the deposit thinner.

Case VI.—Eliza Black, aged 9 (Irish). This patient had been an out-door patient with strumous ophthalmia for a year before she was taken with the measles.—*Jan.* 20. She came to the hospital with a large ulcer occupying the front of the cornea. She had just recovered from the attack of measles, and her eye was irritable to light, and she had considerable circumorbital pain. Ordered belladonna to the brow. Hyd. c. c. gr. ij at bedtime. Iron and quinine, cod-liver oil three times a day, and a solution of zinci sulph. gr. iv aq. ℥j applied every day. She was of a scrofulous diathesis, had caries of spine, and some cough. She remained in the hospital under the same treatment (except for a few weeks she took syr. ferri prot. iod. instead of ferri carb.), until May 12, when she was discharged: the cornea was not clear, though improved: her general

health had declined very much; the curvature of the spine was greater, the cough increased, and she had hectic fever.

Case VII.—John McCloskey, aged 3 (Penn.). Was taken with smallpox Dec. 30. Sick three weeks. Had it severely, was never vaccinated. When convalescent his eye became sore, and came immediately to the hospital.—*Jan.* 21. There was much photophobia and injection. On examining the eye found a small ulcer occupying the centre of cornea, not well defined, and of a yellowish hue. Ordered hyd. c. c. gr. ij at bedtime; syr. rhei ʒj in the morning for two nights and mornings; ferri et quinine three times a day; solution zinci sulph. gr. iv; aq. ʒj, applied every day.—*Jan.* 28. Eye much better; less photophobia and injection; diseased surface circumscribed; same prescription, except hyd. c. creta and syr. rhei.—*Feb.* 14. Eye appears well, except the opacity left by the ulcer, which is thinning. Solution of zinc prescribed.

Case VIII.—Julia Benton, aged 2 (Phila.). Had measles badly: when convalescent, her eye became sore: came to hospital Jan. 17. A large ulcer occupies nearly the whole of cornea, with ragged edge; not much photophobia, but much injection. The child was very thin and anemic: ordered cod-liver oil, ferri et quinine, sol. sulph. zinc gr. iv; aq. ʒj every day.—*Jan.* 24. Eye still very much inflamed; some intolerance, but the ulcer has not changed its appearance. Same prescription ordered.—*Feb.* 4. Eye is much better; there is very little intolerance, less injection, and the ulcer has a more healthy aspect. The same prescription ordered. This child was an out-door patient until *May* 21, when the eye had lost all injection and photophobia: there was quite a dense fibrinous deposit in the cornea, which was, however, clearing up a little. She probably would never have good vision in the eye.

Case IX.—David Harney, aged 35 (Phila.). Had been vaccinated when a child. Last February had the varioloid slightly. In January had had an attack of conjunctivitis, from which he had not entirely recovered when he was taken sick. But, during the time he was suffering from the varioloid, the eye was restored. He was sick two weeks, and when convalescent his eye again became affected. He came to the hospital March 24. He was suffering

with severe circumorbital pain, worse at night. His cornea was nearly covered with an ulcer, and he had great photophobia, and lachrymation, and injection of the vessels. Ordered extract of belladonna to the brow. Cal. one-fourth of a grain, quinine gr. j four times a day.—*April* 2. Slight ptyalism; pain is removed, and the eye more tolerant of light. Cornea still looks badly, and some fears of perforation. Ordered belladonna to brow, blister to temple; quinine et ferrum three times a day; hyd. c. c. gr. ij at bedtime.—*April* 9. Eye much better; ulcer has more healthy appearance; no pain; eye less injected. Ordered ferrum et quinine, sol. arg. nitr. gr. ij; aq. ℥j.—*April* 12. Eye still improving: same prescription ordered.—*April* 24. All irritation has left the eye, and the ulcer is filled with a white fibrinous deposit. Ordered same prescription. —*April* 30. Patient still improving: same prescription ordered.—*May* 20. The patient did not return till to-day: his eye is very much better, and the opacity is thinner; he begins to have some vision with that eye.—*May* 30. Eye still improving: ordered cadmii sulph. gr. iv; aq. ℥j every day. He has not reported himself since. There have been six patients who lost their vision by the ulcers (from exanthemata) treated out of the house. Two with loss of contents of the globe, one from perforation of cornea and prolapsus of the iris, and three from permanent opacity.

Dr. ATLEE stated that he had been called, at noon to-day, to a case which presented all the characteristics of cholera asphyxia.

A proposition (39) for Fellowship was presented.

SUMMARY

OF THE

TRANSACTIONS OF THE

COLLEGE OF PHYSICIANS,

OF PHILADELPHIA.

FROM AUGUST 4, TO OCTOBER 6, 1852, INCLUSIVE.

Stated Meeting, August 4th, 1852.

Dr. MEIGS, Vice-President, in the chair.

Present, twenty-four members.

THE Publication Committee reported that they had issued No. VII. Vol. I. New Series, of the *Summary of Transactions*.

The Censors reported that they had examined the account of the Treasurer, and on comparing it with his vouchers find it to be correct.

The death of Dr. ISAAC PARRISH, one of the Fellows of the College, which occurred on the 30th ultimo, being formally announced by the presiding officer, on motion of Dr. CONDIE, Doctors EVANS, BELL, and NEILL were appointed a Committee to prepare resolutions expressive of the feelings of the College in reference to the loss it has thus sustained.

On motion of Dr. RUSCHENBERGER, it was resolved that the Committee be requested to report at an adjourned meeting of the College, to be held on Wednesday evening, the 11th instant.

On motion of Dr. CONDIE, it was resolved that Dr. SAMUEL JACKSON be appointed to prepare a Biographical Notice of our deceased colleague, Dr. ISAAC PARRISH, to be read before the College.

Dr. NEILL related a case of Omental Hernia, with incarceration of a portion of intestine beneath the transversalis fascia.

DYSENTERY.

Dr. CONDIE inquired of the Fellows present their experience in relation to the dysentery now prevailing throughout the City and County of Philadelphia. He had attended some eighteen cases, five of which are still under treatment. Thirteen have been discharged cured, and those remaining have nothing in their symptoms that should lead him to anticipate for them a less favorable result.—Judging, however, from the number of deaths that have been reported to the Board of Health, during several weeks past, the disease, as it has prevailed beyond the circle of his practice, has been, he should presume, of a much more severe and intractable character. The cases seen by Dr. Condie occurred in patients varying in age from five to sixty-five years. The tormina and tenesmus were in all severe, and almost constant. In the majority of the cases, the disease commenced as an ordinary diarrhœa, and it was not until the second or third day that the characteristic symptoms of dysentery became manifest. In a few, however, of the cases, the proper dysenteric symptoms were present from the onset of the disease. The discharges from the bowels were always small in quantity, in some instances consisting of not more than a teaspoonful of thick, transparent mucus; in others, they were somewhat larger in quantity, and composed of mucus tinged with blood, or alternately of mucus and of blood. Sometimes the discharges were almost entirely of blood. In these hemorrhagic cases, the stools were, in general, more copious and attended with less straining than when of mucus alone or of mucus stained with blood. Sooner or later, in the majority of cases, the discharges assumed the appearance of dirty water, or of water in which meat had been washed, containing often opaque flocculi of a white or dirty yellow color. In a few cases, the discharges were, occasionally, of a frothy, yeast-like appearance. Great irritability of sto-

mach was present in all the cases, occasionally vomiting, especially upon anything being taken in the form of food or drink. In several of the cases, there was considerable tenderness of the abdomen; in a few, slight tumefaction. The tongue was usually moist, more or less coated with a dirty white or yellowish fur, and red at the point and edges. Few of the patients presented any decided symptoms of fever. The skin, though dry, was usually cool and soft. The pulse was, in general, increased in frequency, but soft, and rather bordering on feebleness than strength. Many of the cases were marked by great restlessness and constant jactitation. Throughout the attack, the patients rarely slept, even when under the influence of large doses of opium.

The medium duration of the cases was from eight to ten days. Some, however, were protracted to twenty and twenty-six days; after the second week, the discharges were of a feculent, healthy appearance, and unattended with pain or griping. These discharges, after continuing for a day or two, would be followed by tormina and tenesmus, the discharges becoming again small in quantity, and composed chiefly of bloody mucus. This alternation of healthy-looking and dysenteric discharges took place, in a few cases, on the same day. In some instances, especially when the disease was early arrested, convalescence was prompt and rapid. Most commonly, however, the patient was long in regaining his appetite and strength. The bowels continued to be readily disturbed from slight causes, repeated loose mucous stools being produced. It is a curious circumstance that, in the most protracted cases, especially those occurring in adults, which have fallen, during the present epidemic, under the care of Dr. Condie, the patients exhibited a comparatively slight degree of emaciation. In the cases occurring in children, however, the emaciation was much more decided.

In regard to treatment, the Doctor has relied chiefly for the arrest of the disease upon opiates and astringents administered by the mouth. He prescribes at once as large a dose of opium, combined with acetate of lead, tannin or nitrate of silver, as may be safely given, repeating it to the same extent, at shorter or longer intervals, according to the effects produced by it upon the tormina and tenesmus. In the early state of the disease, and in hemorrhagic cases, he has found, he thinks, the best effects from the addition of acetate of lead to the opium, in the proportion of one, two, or three

grains to each dose, according to the age of the patient, and the amount and frequency of the bloody discharges. At a more advanced stage of the disease, especially when the discharges are composed chiefly of a discolored watery fluid with albuminous flocculi, he has found more decided advantage from the nitrate of silver, in doses of from a third to a half grain every three hours to an adult, and of one-fourth of a grain to a child. A full dose, say from two to two and a half grains of opium, with one of nitrate of silver, and five of blue mass, given to an adult, at bedtime, he has often seen produce a most decidedly beneficial impression upon the disease, the patient passing a comparatively quiet night, and voiding in the morning a full, dark-colored feculent stool, followed by a considerable abatement of the tormina, and a remission of the, before, almost incessant tenesmus. Of the tannin, Dr. C. has made a very full trial, during the present epidemic of dysentery. It does not appear to him to be well adapted to the early stage of the disease, and at a more advanced stage he considers it inferior to the nitrate of silver. He has found it very apt to disorder the stomach, augmenting the nausea so generally present, and occasionally producing vomiting. The evidence in favor of the nitrate of silver, as a remedy in dysentery, furnished by several of the physicians of Europe, and many of our own country, is of a very decided character. In the reports read at the last session of the Pennsylvania State Society, strong testimony is furnished of its good effects, especially in the more protracted cases of the disease. In the advanced stage of many cases, especially those occurring in young subjects, Dr. Condie has found a combination of tincture of kino, camphorated tincture of opium, and prepared chalk, to arrest very promptly the frequency of the discharges, when given at short intervals during the day, and followed at bedtime by a full dose of opium; and, combined with from three to five grains of blue mass, it has often effected a cure in cases that appeared to be assuming a chronic and intractable form.

Poultices and warm fomentations to the abdomen, whenever the restlessness of the patient could be so far controlled as to permit of their being properly applied and retained, exerted always a soothing impression upon the more distressing symptoms, and appeared to shorten the duration of the attack. When the tormina was particularly severe and continued, it was, in many cases, very promptly

allayed by the application to the abdomen of a flannel cloth wet with spirits of turpentine, and kept on as long as the patient could endure it.

Throughout the disease, it is of the utmost importance that the patient be kept as constantly as possible in the recumbent position, and that he be urged to restrain the constant inclination he experiences to rise from bed for the purpose of evacuating his bowels; the straining efforts so generally consequent upon each effort prolonging his sufferings, and aggravating the distressing tenesmus which forms so prominent a symptom of the disease. It is better that he should allow the discharges from his bowels to escape on cloths, placed beneath him in bed, than to rise each time he feels the inclination.

Cold water, butter-milk, common tea, whey, or weak lemonade, were allowed the patients to allay thirst, and as their only aliment during the continuance of the disease. In some cases, when these fluids were taken cold, they caused pain in the stomach, with an increase of the tormina. Warm tea or lemonade was substituted in such cases with good effect.

When convalescence set in, the utmost caution had to be observed in regard to the amount and quality of food allowed the patient, and to prevent undue exposure and over-exertion.

Such, Dr. Condie remarked, was an outline of the treatment pursued by him in the cases of dysentery that have fallen under his care during the present prevalence of the disease, and which has thus far conducted them all to a favorable termination. Of the result of the five cases that still remain, there can be little doubt.

In no instance has he seen any symptoms calling for direct depletion. Blisters he has never used; the benefit derived from their application being no compensation for the discomfort they occasion the patient.

He has been long convinced of the impropriety of the ordinary practice of commencing the treatment of dysentery by the administration of purgatives. He can perceive no indication which they are calculated to fulfil; for, the supposition that the intestines are loaded with hardened feces or other irritating matters, which it is necessary to remove by purgatives, has no foundation in truth. The attack of dysentery is most generally ushered in by diarrhœa, during which the bowels are pretty fully evacuated. The mildest purga-

tive Dr. Condie has generally found to aggravate the tormina and tenesmus, and rather to prolong than shorten the duration of the disease.

He is equally opposed to the employment of enemata in the treatment of dysentery. He has not seen the soothing effects ascribed to those of an emollient and anodyne character follow their use when administered in the early stage of the disease, nor have those of an astringent quality succeeded in arresting the frequent mucous and bloody discharges when employed at a later period of the attack. The enemata are very generally discharged immediately after they are thrown into the rectum, and he has known them often to aggravate the tormina and tenesmus they are administered to relieve. The same objections to the use of injections in the treatment of dysentery have been made by several of the British physicians.

Dr. BELL did not distinctly understand whether the gentleman who has just spoken intended his remarks to be received as condemnatory of purgatives and enemata, in the treatment of dysentery generally, or only as expressive of their effects in the form and grade of the disease presented by the cases that had fallen under his care during the present season. Now, the treatment of dysentery will vary not only in consequence of the greater or less violence of the disease, its simple or complicated form, in different cases, but also in the different stages of the same case. Purgatives, in the early period of the attack, may be demanded to remove accumulations of feces and other sources of irritation from the bowels, and thus produce a beneficial effect upon the disease. We shall only allude to the very generally admitted advantage of calomel as a purgative in the first stage, and in smaller doses subsequently, to act both on the liver and muciparous glands. In respect to injections into the rectum, although they may not be advisable in the early or acute stage of dysentery, unless, perhaps, when of a soothing or emollient kind, yet, in the more advanced stages, when the disease has assumed, in some measure, a chronic character, astringent enemata will often be found of decided advantage. They have, under such circumstances, received the sanction of all those practitioners who have had the most ample opportunities for observing the disease. By such, their effects are spoken of in terms

of commendation that should cause us not slightly to proscribe their employment. Dr. B. has had, recently, some experience in the treatment of dysentery as it prevails in the West. He has, perhaps, more confidence in the efficacy of direct depletion whenever there exist indications of severe and extended inflammation of the large intestines, than is entertained by many of his contemporaries. To control the intense pain and constant tenesmus, by which many cases of the disease are attended, he has administered opiates by the mouth and in the form of enemata; and in the advanced stage of protracted cases, and in the decidedly chronic form of dysentery, he has certainly seen much benefit result from astringent and anodyne injections per anum.

When, as not unfrequently happens, the intestinal lesion is restricted to the rectum, enemata of a solution of sugar of lead, or of sulphate of copper, or of nitrate of silver, are productive of good effect. In some instances, he has directed, with advantage, a solution of one of these articles in such a quantity of fluid as to allow of its being thrown up into the colon, and thus directly applied to the diseased surface of that intestine. Laudanum has been added when the symptoms indicated the propriety of such a combination.

Cognizant, as we are, of the extensive inflammation, too often ending in, or accompanied, in its more advanced stage, by ulceration of the colon and rectum in dysentery, we cannot be surprised at the difficulty of arresting the disease. In aged persons, this difficulty is greatly increased. In such subjects, he has sometimes arrested the progress of the disease, as far as the diarrhœa and tormina were concerned, by the above means. He remarked that he spoke now of subacute and the incipient chronic dysentery.

Dr. JEWELL had been disappointed in the use of anodyne and astringent enemata, during the present epidemic of dysentery. They had failed, in his hands, to produce those soothing results which had always been ascribed, and deservedly so, in his opinion, to their employment in the disease. With him they had been rather a favorite remedy to relieve the harassing and painful bearing-down, with frequent desire to stool; he could generally rely upon them to relieve his patients for several hours together; but during the present season, he believed, from what he had witnessed, that they had rather tended to increase than to alleviate the tenesmus.

He would not, however, condemn them; they are too valuable an adjuvant to dispense with in the treatment of the disease generally; the failure in the cases that have fallen under his notice during the present season, may be attributable to accidental causes beyond his control; he was aware that enemata often fail from the awkward manner in which they are given by the nurse, or the extreme restlessness of the patient. His prescription usually consisted of forty or fifty drops of laudanum, in from half a gill to a gill of fluid starch, for an adult, and repeated every three hours until relief is obtained; sometimes he has substituted flaxseed tea for the starch. He has had under treatment, since June, some fifteen to twenty cases of dysentery, all of which have recovered. He had no occasion to use the lancet in any of them, nor has he bled in dysentery for a number of years. He did not think the cases that have recently come under his notice were accompanied with high inflammatory action; they partook more of an asthenic character.

While on this subject he would call the attention of the Fellows of the College to one particular symptom that he has encountered in many of his cases during the present summer; he alluded to a continuance of the bloody discharges from the bowels, unaccompanied by pain or fever, during the period of convalescence. For this troublesome symptom he has used successfully the acet. plumb. in 2 gr. doses, combined with ½ gr. of opium, every two hours. He has also prescribed tannin in conjunction with quinia, and he thought, with considerable advantage, it appearing to act as a tonic and astringent to the debilitated mucous surface of the colon.

Hope's mixture has been given by him with advantage in those instances where there was a disposition to nausea and vomiting, as well as in those accompanied with severe pain. Dr. Jewell was not favorable to the frequent use of purgatives in dysentery; when their use becomes necessary, he believed they were to be viewed, generally, in the light of necessary evils; they have appeared to him, generally, to increase the intestinal irritation. He preferred, decidedly, an alterative and anodyne treatment. He has found the use of calomel and Dover's powder in small doses, at intervals through the day, with an opiate at night, to answer a good purpose. Did not believe the treatment of dysentery this season, by purgatives, and especially by the oleaginous mixture, had proved very successful in the hands of those who had tried it. He had under-

stood, on good authority, that Dr. Geo. Stewart, late of Filbert Street, who died recently of dysentery, had commenced the treatment of his own case with an active purge of rhubarb and calomel, and that, although subsequently he placed himself under the care of experienced and skilful medical attendants, it was found impossible to arrest the rapid progress of his disease to a fatal termination.

Dr. WALLACE has not met with, in the dysentery of the present season, a single case to which the lancet appeared to be appropriate, and but few, say from five to six, in which leeches were advisable. Where the latter were used, they were placed upon that portion of the abdomen where the principal soreness and tenderness on pressure were experienced. The disease has been rather of a low grade of action, and in some cases nutritious broths and brandy punch have been demanded from the outset. The discharges have been generally very characteristic, and in most instances very frequent. Dr. Wallace has seen the disease in persons varying from twelve years of age upward, scarcely a case in children under twelve; he, of course, excludes all cases of cholera infantum, and of the diarrhœa of young children, confining the remark to cases of a strictly dysenteric character.

The combination which was given by him with the most satisfactory results is—

℞.—Calomel gr. iss to gr. iij;
Opium gr. iij to gr. vj;
Acet. lead ℈j to ʒss.
Mixed, and divided into twelve powders.

One powder given every two hours. The diet he has ordered has been rice-water and boiled milk, occasionally chicken-broth.

In most instances, the discharges became bilious and fecal on the third day; in a few cases, on the second day; some, however, not until a later period. The opium and acetate of lead were continued after the calomel was laid aside. Dr. Wallace pursued this plan of treatment at the House of Refuge, where about thirty of the inmates had dysentery, and in all the cases but one (which proved fatal), the result was all that could be desired. He met, also, with about the same number of cases in private practice, of which one died.

Dr. Wallace in every case enjoined upon the patient, as *absolutely essential* to his speedy recovery, perfect rest in bed, and

compelled him, whenever it was possible, to use a cloth to receive the evacuations from his bowels.

Enemata of starch and laudanum, with acetate of lead, were occasionally of much service; in about probably one-third of the cases. In the others, Dr. Wallace did not find it necessary to resort to them.

Sinapisms, followed by bathing the abdomen with oil and laudanum, he resorted to constantly; the surface of the abdomen being covered with carded cotton after the bathing.

A proposition (1) for Associateship was presented.

Adjourned Meeting, August 11th, 1852.

Dr. MEIGS, Vice-President, in the chair.

Present, twenty members.

The Committee appointed to prepare resolutions in reference to the death of Dr. ISAAC PARRISH, presented the following, which were unanimously adopted:—

Resolved, That the College has received, with deep regret, the announcement of the demise of its late Fellow, Dr. ISAAC PARRISH, who, after a few days' illness, died on the 30th ultimo.

Resolved, That by this unlooked-for event the College has lost one of its most active and useful members; one, whose zeal for its welfare, and whose professional attainments, together with his urbanity and moral worth, had characterized him as a most valuable colleague, and secured for him the respect and esteem of its Fellows.

Resolved, That the Fellows of the College, sincerely participating with the family of their deceased colleague in the sorrow occasioned by their great and sudden bereavement, request the Secretary to transmit to them the expression of its unfeigned sympathy.

Stated Meeting, September 1st, 1852.

Dr. MEIGS, Vice-President, in the chair.

Present, thirty-four members.

Dr. HENRY TIEDEMANN was duly admitted a Fellow.

Dr. CONDIE inquired of the Fellows present whether they had any experience in reference to the effects of quinia in large doses in the treatment of typhoid fever. He had himself employed it in five cases occurring in children, in all of which the characteristics of the disease were distinctly marked. The fever was in no instance cut short by the quinia; but it certainly appeared to him that, under its use, the duration of the disease was very materially shortened, and convalescence more promptly and fully established. The quinia was given in solution, in doses of from two to three or four grains, every three hours, according to the age of the patient, combined with one-third the quantity of tannic acid, by which the intense bitterness of the quinia was in a great measure removed, and one great difficulty in the administration of the remedy to young patients done away with.

The inquiry of Dr. Condie gave rise to a conversation, in which the general therapeutic properties of the quinia were very fully discussed, but no facts falling within the observation of the other Fellows present, in relation to its curative powers in typhoid fever, were elicited.

REGISTRATION LAW.

The subject of the law requiring the registration of the births and deaths by the physicians of Pennsylvania, in whose practice they occur, which went into operation on the 1st day of July last, was brought to the notice of the College by some remarks offered by Dr. Jackson. The defects of the law were very generally admitted; but it was insisted that the good to be derived from the regular registration of births and deaths throughout the State, by the accumulation, in this manner, of reliable statistics, valuable to the phy-

sician in his investigation of the local causes of disease, and equally so to the public generally, inasmuch as it is only upon a correct knowledge of those causes that the means for their removal can be determined upon, and the health of the community, through the agency of these, successfully improved, should induce every physician to lend his aid to carry out the provisions of the present law, in anticipation that, when the prejudices of many in the interior of the State, in reference to the subject of registration in any form, shall abate, a more favorable opportunity will present itself, than at present exists, to obtain from the legislature such amendments of the law as will render it acceptable to the members of the profession generally.

Opposition to the present law by physicians, or any attempt to have its objectionable features removed by an appeal to the legislature, it was insisted upon, would, at the present time, eventuate in its entire repeal, and the postponement, for a long period, of any provision for a registration of marriages, births, and deaths in the State of Pennsylvania.

Dr. CONDIE, Chairman of the Committee of the State Medical Society, through the exertions of which the enactment of the registration act was obtained, stated that all the requirements of the present law had not received the sanction of himself and colleagues; not but what, in their opinion, the entire series of statistics provided for by it would be of importance to the community at large. They, however, did not approve of imposing upon the physician the task of collecting and returning those facts in connection with the births and deaths occurring within the sphere of his practice, that were not of importance as medical statistics. There are provisions, also, that to the Committee appeared of very great importance, and which they would have been pleased to see introduced into the law—such, for example, as one providing for a proper tabulation of the returns made throughout the State, and their publication in a form adapted for general circulation and ready reference. But the Committee found it no easy task to induce the legislature to take up the subject of registration at all, nor would they have succeeded, had they not had the good fortune to enlist in its favor one of the representatives from the city of Philadelphia—a legal gentleman fond of statistics—and to whose exertions they were mainly

indebted for the passage of the law. By this gentleman the law was modelled so as to embrace a registration of certain particulars which, although of no value to the physician, are all-important in a legal point of view.

The Committee, believing that they had overcome the chief difficulty, and which by many had been supposed to be insurmountable, in obtaining the sanction of the legislature to the registration of the births, marriages, and deaths occurring throughout the State, were willing to accept the law with all its defects, hoping that, when the advantages resulting from such a registration should be more generally recognized, any necessary modifications in the details of the system could be readily procured.

It is much to be desired that the members of the profession should cheerfully submit to the slight increase of labor inflicted upon them by the present law, rather than endanger the permanency of registration in our State, and thus deprive themselves of the important data they can procure by no other than a continued, regular, and exact registration of births and deaths, and of the several particulars connected with them calculated to throw light upon questions of vital importance connected with population, the salubrity of the different sections of the State, the causes of disease in each, and the circumstances which augment or diminish, in different localities, the duration of life.

Stated Meeting, October 6th, 1852.

Dr. WOOD, President, in the chair.

Present, forty-five members.

ARCHIBALD HALL, M. D., F. R. S., Professor of Anatomy in the University of Magill College, Canada, was elected an Associate.

Dr. PEPPER presented the history of two cases of disease, as follows:—

AN OBSCURE CASE OF LARYNGITIS, CAUSED BY THE PRESSURE OF FALSE TEETH LODGED IN THE PHARYNX; AND ALSO A CASE OF FATAL HEMORRHAGE, FROM AN ULCER IN THE PHARYNX, OPENING INTO THE CAROTID ARTERY. BY WILLIAM PEPPER, M. D., ONE OF THE PHYSICIANS OF THE PENNSYLVANIA HOSPITAL.

B. W., bricklayer, æt. twenty-three, entered the hospital March 27th. Stated that for the last six weeks he had been suffering with sore-throat, and that for three years he had also been subject to convulsions—the attacks generally coming on about once in three months. At the time of admission, his general appearance was that of good health; he, however, had huskiness of the voice, a hoarse barking cough, and some slight muco-puriform expectoration. On the right side of the larynx there was a slight prominence, and some tenderness on pressure; a careful inspection of the fauces, however, revealed nothing peculiar.

From the above circumstances, it was inferred that the patient was suffering with chronic laryngitis; and certain remarks let fall by him, in connection with a suspicious eruption over the chest, led to the belief that this affection was probably syphilitic in its origin; moreover, this view of the case appeared to be confirmed by the somewhat offensive character of the sputa, and the diseased condition of the thyroid cartilage, as manifested by the external swelling and tenderness over this part. Accordingly, he was directed three grains of blue pill, with two of Dover's powders, three times a day, whilst, at the same time, he was to inhale the vapor from a weak

solution of iodine; strong iodine ointment was also applied over the larynx. By the end of one week, his mouth became a little sore, and the mercury was suspended; about this time he had an epileptic convulsion—the first since his admission. Upon the following day I was induced, on account of his slight ptyalism, to examine the gums, and then perceived that the plate, which secured several false teeth, was much discolored and blackened. Upon inquiry, he informed me that, for economy's sake, it was made of silver; and then incidentally remarked that, some seven weeks ago, he had lost a similar one during a convulsion, and thought it not improbable that he had swallowed the teeth, and that they were the cause of his trouble, since it was about that time his sore-throat commenced. Accordingly, his throat was again carefully inspected, but nothing could be seen, or felt by the finger carried far back into the fauces; upon one occasion, the gullet forceps was introduced to a considerable extent by the resident physician, Dr. A. Hewson, without, however, detecting any foreign body.

From this time, the idea above suggested by the patient was abandoned; and particularly so, since, during his stay in the house, he had complained of no difficulty in swallowing, although at different times he had partaken of solid food—such as vegetables, bread, and meat. The treatment was, therefore, resumed, and he was now directed five grains of iodide of potassium, three times a day, together with an expectorant mixture containing small portions of morphia and senega. On the 18th April, he had another convulsion; but, in other respects, remained much the same, excepting, indeed, that from about this time his laryngeal symptoms had somewhat improved.

May 1st, or rather more than a month after his admission, he had a return of his convulsion, during which he threw up the lost set of teeth. They were three in number, representing the incisors of the upper jaw, and attached to a silver plate, which had been moulded to the roof of the mouth, and secured to the molar teeth by two springs on each side—the transverse and antero-posterior diameters of the plate, at its widest points, being about one inch and a half. From the above date, the most distressing symptoms rapidly subsided, and he left the hospital on the third of the month, to join a firemen's parade, apparently much pleased with his safe delivery.

When we bear in mind that the lodgment of any considerable body in the pharynx or œsophagus generally gives rise to dysphagia, dyspnœa, violent efforts at vomiting, and other distressing symptoms, it at first sight might appear surprising that this train of symptoms did not exist in the present instance; but, on referring to the peculiar shape of the plate above described, it will at once be perceived that it might readily be lodged in the lower and anterior part of the pharynx—in a transverse direction, and with its concavity towards the spine—without materially obstructing the passage of food; and it was no doubt owing to this particular position that it entirely escaped detection, either by the finger or forceps. A more thorough search with instruments better adapted for the purpose would, most probably, have led to the detection and removal of the foreign body; but we were deterred from a more minute investigation of the case by the imperfect and contradictory statements of the patient and his friends, as also by the absence of those symptoms which usually attend under such circumstances; moreover, the laryngeal symptoms appeared to be fully accounted for upon the not improbable supposition that he was suffering from syphilitic laryngitis. The result, however, clearly shows that the inflammation had been caused by the pressure of the foreign body lodged in the pharynx, and which had there been impacted for a period of nearly three months.

The following case of ulceration of the pharynx, opening the carotid, and giving rise to fatal hemorrhage, appears worthy of record, as well on account of the rarity of this accident as of the difficulties which attended the diagnosis:—

A tailor, aged 30, entered the hospital March 25, 1848, suffering with erysipelas of the face. As he was both deaf and dumb, I was obliged to communicate with him by writing, and obtained the following history of his case: For about one week previous to admission he had been indisposed, though not obliged to abandon his business; at that time he had slight headache and some soreness of the throat, but it was not until the day before entering the hospital that he perceived some swelling and redness about the right nostril. His loss of hearing and speech had been of long duration, but in other respects he had always enjoyed uninterrupted good health. He was of large frame, and fleshy, being

in height six feet and two inches, and weighing about two hundred pounds.

On the day after his admission, the inflammation of the nostril, which was evidently erysipelatous in character, had extended to the eye and cheek. He now complained of pain at the angle of the jaw on the left side, and had considerable difficulty in opening the mouth or protruding his tongue; the left tonsil was also red and swollen, but without any perceptible fluctuation. He had no fever, but, as the bowels were constipated, he took a dose of magnesia; cold mucilage was applied to the face, and the tonsil was touched with a solution of the nitrate of silver. On the 29th, the erysipelas of the face had nearly disappeared, and his throat was much relieved by the discharge of some offensive, bloody, puriform matter, apparently coming from the inflamed tonsil; and he was accordingly directed a mucilaginous gargle, and a flaxseed poultice to the side of the neck.

April 1st (or seventh day after admission, and when, to all appearances, convalescent), he was suddenly seized with a violent cough, followed by a copious discharge of blood from the mouth, amounting to about two quarts. It was ejected in mouthfuls, as in cases of violent hæmoptysis; and soon after it had ceased, auscultation revealed mucous rales at the roots of the lungs, and thus at first led to the impression that the blood had absolutely come from the bronchial tubes. The patient was placed in a strong light, and the throat most critically examined, but nothing remarkable was observed; the inflamed tonsil had nearly regained its natural size, and no blood or pus could be expressed from it by the pressure of the finger. The heart was also carefully examined, but appeared to be in all respects perfectly normal; nor could any evidence of pulmonary apoplexy or tubercular deposit be detected in any part of the lungs. For several days after the hemorrhage, the patient continued to expectorate a small quantity of sanious matter; he was also much prostrated, and his lips were blanched and extremities cool. Half a grain of opium, with two grains of acetate of lead, were directed every three hours; perfect quietude and the free use of ice were also enjoined; soup diet.

No important change occurred up to the 6th, or just six days since the severe hemorrhage, and the twelfth after his admission; this day, however, at about 6 P. M., he was again suddenly seized.

with a gush of blood from the mouth, and, upon this occasion, discharged nearly half a gallon in the course of a few minutes. He at once became exceedingly prostrate, and, despite the most powerful stimulants, expired one hour after the accident.

The body was examined on the following day. The heart, lungs, liver, and other organs were much blanched, but in other respects healthy; and the blood contained in the venæ cavæ was thin and watery. The larynx and trachea in connection with the pharynx and œsophagus, as also the large bloodvessels of the neck, were now removed in mass by passing the bistoury close to the spine and along the inner margin of the lower maxillary bone; the parts being thus removed, the carotid artery of the right side was laid open throughout its whole extent, and, in its external branch—at a point about an inch above the bifurcation of the primitive vessel—there was an ulcerated opening, through which a probe could be made to pass, by a fistulous canal, directly into the pharynx, the end of the instrument emerging just behind the tonsil, by an opening not more than two lines in diameter, and in a great measure concealed by this gland.

A correct diagnosis in the above case would at once have suggested the necessity of tying the carotid artery, and this, in all probability, would have saved the life of the patient; but the rapid manner in which the blood was discharged—completely filling the mouth and almost producing suffocation—rendered it quite impossible to make an accurate examination of the throat, even had the true nature of the accident been suspected. During the interval between the attacks of hemorrhage, it was still impossible to see the small opening through which the blood escaped, since it was completely concealed by the tonsil. Moreover, the fact of the hemorrhage having spontaneously ceased for several days was not calculated to point out its true source, whilst, at the same time, the persistence of the cough and rales strongly disposed to the belief that the lungs were more or less implicated.

Dr. JACKSON observed that those who have false teeth should be on their guard, lest these teeth become accidentally detached, and by falling backwards into their throats, cause by their presence there most unpleasant if not serious consequences. Dr. John Wilson Moore was awaked one night by a terrible alarm at his door.

Upon proceeding to inquire into the cause, he found that it was made by a poor fellow who was suffering the utmost distress, being almost strangled from having accidentally swallowed his teeth—artificial ones of course—some three or four in number attached to a metallic plate. They were found to be firmly impacted at the upper part of the gullet. Dr. Moore succeeded in removing them by means of a blunt hook, to the immediate relief of the unfortunate patient.

Dr. PAGE saw a case in the hands of Dr. J. H. B. McClellan, in which two or three artificial teeth, together with their plate, were accidentally swallowed. The teeth lodged in the œsophagus, and gave rise to pain, though to no difficulty in swallowing water, nor to dyspnœa; Drs. McClellan and Page were unable to extract the teeth, and did not consider it prudent to force them downwards. Thirty grains of ipecacuanha were directed with the view of bringing them up by vomiting, the very thought of taking which caused emesis on his way home, and the patient threw up the teeth in the street.

Dr. PAGE related also the following case:—

During the spring, a patient was admitted into the Blockley Hospital with a large syphilitic ulceration on the left side of the throat, which was reduced by treatment to the size of a ten cent piece. During the morning prior to a visit by Dr. Page, the patient was attacked with a paroxysm of coughing, during which he discharged a very large quantity of blood. The resident physician (Dr. Waring) arrested the hemorrhage by the application of alum and pressure. When Dr. Page saw the patient, he was cold and powerless; he was in fact so far exhausted as to preclude all hope of recovery, and he shortly after expired—his death evidently resulting from the hemorrhage from the ulcer in the throat. No *post-mortem* examination was made.

Dr. PEPPER remarked that the case just related by Dr. Page, though it resembled in some particulars the one communicated by him, differed from it, inasmuch as it was evident from whence in Dr. Page's case the hemorrhage proceeded, whereas, in Dr. Pepper's, there was no apparent ulceration of the throat, and the blood being

drawn into the respiratory tubes during inspiration, gave rise to phenomena by which the diagnosis was further obscured.

Dr. REMINGTON related the case of a lady who, some ten years since, occupied the station of housekeeper in J. Miller's family, and, while eating a crust of bread at breakfast, by some means displaced a set of artificial teeth which lodged in her œsophagus. There were six teeth fixed to a metallic plate with projecting hooks, and it will readily be conceived that the presence of such a body in the gullet gave rise to intense dyspnœa and distress, from which she hoped to obtain relief by a mustard puke; failing to do so, after the lapse of several hours she came to town and sought his advice. After several ineffectual attempts to reach them with the forceps, Dr. R. introduced a probang, and forced them down into the stomach.

By his direction, she dined on mush prepared from oatmeal, with a view to envelop the teeth in a soft mass, and protect the mucous coat of the bowels from injury in their passage. On the ensuing day, a dose of castor-oil was administered, which caused their expulsion on the third day, without apparent suffering or inconvenience.

INSANITY.

Dr. BELL stated that, in a newspaper published at Cincinnati, he had seen an account of an individual being sent recently to the insane department of the Commercial Hospital, of that city, under the authority of a certificate from two magistrates and a physician, who, two days subsequently, was discharged from the institution in consequence of no symptoms being detected in him indicative of mental derangement. Such an occurrence is sufficiently mortifying to our professional pride, if we have any left, even were it a solitary instance, and not a repetition of the same error committed on other occasions. During the past winter, Dr. Bell saw a young man committed to the same institution as insane, in whom, upon the most careful examination, and after repeated conversations, he was unable to detect the slightest indication of insanity. He was a man, it appeared, of strong passions, and having threatened his brother with violence, should he come in his way, he was sent, at

the instance of the latter, to the hospital, to secure him from his threats.

There is much and deplorable ignorance upon the subject of insanity, its nature and manifestations, as well as in respect to its proper management, not only among those out of the profession, but among physicians also. The disease is but superficially studied by the majority of practitioners, while to those who are about to enter into the profession, few opportunities are afforded to enable them to become familiar with its characteristics, in the several forms in which it presents itself—its pathology and treatment.

Unfortunately, the shortness of the sessions in our medical schools renders it impossible for the profession to present this, and other subjects, in anything like requisite fulness and detail, if at all.

After some observations from other members of the College, Dr. BELL remarked that he had introduced the subject of insanity in reference to its connection with medical jurisprudence, which is so deplorably neglected in medical education. The consequences are, that the community suffers in a variety of ways, and the ends of justice are often defeated; while the profession suffers in its reputation, owing to the discordant, and for the most part hasty and immature, opinions of its members on medico-legal subjects, before the courts and other tribunals.

In proof of the neglect of suitable inquiries into a detection of the cause of death from violence, whether with suicidal or homicidal intention, or the result of accident, Dr. Bell related a case which came under his own observation. A man of intemperate habits, a boot-black in a large hotel, was found, early in the morning, senseless, just outside the door of the basement. He expired in less than an hour after being thus found and brought into the house. A coroner's jury met on the occasion, and Dr. Bell, who lodged in the hotel, was required to give his opinion of the causes of the man's death. It was easy to feel, even through a thick crop of hair, that the scull was fractured; but Dr. B., of course, told the coroner that it would be necessary to make a regular anatomical examination before a decided opinion could be expressed as to the nature, and extent, and probable cause of the wounds which the man had received. To this the coroner replied that an examination of the kind must be dispensed with, that the party making it would

not be paid for his labor, and that Dr. B. could give his testimony after groping and feeling the head of the deceased. In fact, this was all the examination that was made, and all that the *enlightened* jury had to aid it in forming a verdict.

Dr. Bell suggested, in view of the neglect of medical jurisprudence in our medical schools, that a short course of lectures, embracing the main principles and prominent facts, be delivered before the College, and other similar societies, by one of their members, respectively. He disclaimed, for himself, any desire to perform this task, which his own engrossing engagements would prevent his undertaking.

Dr. EVANS remarked that the subject of insanity was one of particular interest to the public. From the ignorance that prevails in relation to it many difficulties occur, involving, not unfrequently, the dearest interests of individuals, and the peace and happiness of families; and, at the same time, presenting often a serious obstacle to the physician in the performance of his duties towards the insane and those most interested in their welfare. It is important, therefore, that means should be devised adapted to enlighten the public mind in relation to the subject. The manner in which inquests of lunacy are now conducted in this State renders them a perfect farce. The individuals who compose them make up their verdict, too generally, not from the testimony given before them by competent medical witnesses, but from their own prepossessions or the misstatements of ignorant and interested persons. Could the same plan be introduced here that is pursued in France, the possibility of an erroneous decision, in questions of lunacy, would, in a great measure, be removed. There the question is submitted to three competent medical men, who have sufficient time allowed them to make up their judgment, which may be rendered at the termination of one, two, or three months, according as they are enabled to arrive at it more or less early.

In many cases, it is impossible for any one to decide as to the sanity or insanity of an individual from a single examination, and, in some cases, from repeated examinations. Nor, in cases of doubtful insanity, is any one competent to arrive at a safe conclusion, unless he has made the subject of insanity his especial study, and has thus become conversant with the many phases under which

it may present itself. The insane exhibit frequently the utmost ingenuity in evading any manifestation of their mental aberration, especially when they suspect that, if their true condition is detected, their liberty will be in any way abridged. A stranger will, in consequence, be often led to pronounce an individual perfectly sane, who is, in fact, the proper subject for an asylum.

Dr. Evans stated that he had at one time under his care a female patient who evinced insanity only in the presence of her brothers and himself: if any other person was present, no indication of the deranged state of her mind could be detected. On the other hand, the disturbance of intellect, observed in the early stage of an ordinary case of inflammation of the brain, has been mistaken for insanity, and the recovery of the patient jeoparded by his removal, many miles, perhaps, to an insane asylum, when his safety required that he should have been kept quietly in his own chamber.

Dr. C. MORRIS expressed his conviction of the great importance of the study of insanity; a disease which is always increasing in the direct ratio of the increase of population, and the difficulty of procuring a livelihood resulting from competition of numbers and the artificial circumstances by which men surround themselves. It is a disease which it is not only difficult to define, but often to determine. The extreme cunning of insane patients in concealing the deranged condition of their mind in the presence of those whom they wish to mislead, is often surprising, and is very apt to deceive those who are not familiar with the characteristics of the varying forms of mental disease. When Dr. Morris was one of the resident physicians of the Pennsylvania Hospital, a patient in the insane department induced an attorney to procure an inquest in his case. The jury met, and after what they presumed to be a cautious examination of the patient, were upon the point of pronouncing him sane, when Dr. Morris, who up to this period had refrained from the slightest interference with the proceedings, simply inquired of the patient how long he had ceased to be "the Saviour of mankind," when the fact of his insanity was rendered evident to all present. On another occasion, a patient was discharged from the institution, being pronounced, after a legal investigation, to be unaffected with insanity. Shortly afterwards, this very individual was found riding

on a horse, without saddle or bridle, in a state of nudity, and exhibiting other unquestionable symptoms of insanity.

But the difficulty is sometimes equally great from the fluctuating character of the disease itself. Dr. Morris has a patient who for years has been subject to paroxysmal insanity. It not only varies from week to week, but very often so suddenly, and apparently without exciting cause from without, that he has known her to spend the evening in the family circle in the full enjoyment of social intercourse, return to rest apparently perfectly well, and awake in the morning in a state of violent, excited mania. When the mind is least disturbed, she is subject to hysteriform convulsions.

The treatment of insanity must be conducted on general principles. Nothing could be more absurd or pernicious than the idea of subjecting every case of mental derangement to bleeding, except the entire denunciation of that most useful agency. Dr. M. has a patient subject to occasional attacks of the disease, which are only manifested by the recurrence of a peculiar train of ideas and consequent actions, who is always relieved, cured for the time being, by cupping or bleeding. The amount of blood taken at some attacks has been very large. Insanity was connected with, if not dependent upon, deviations from bodily health of various kinds, and affecting very different organs. Iron, tonics, opium, and other narcotics might, any one or all, be required, according to the state of the patient's general health. There was too much disposition to generalize about the disease and its treatment. Dr. M. took the opportunity to enter his protest against one idea which was too generally received by the profession, and derived from the reports of public institutions, viz. that it was necessary to remove the insane to public institutions in the very early stages of the disease. He believed the disease was often aggravated and confirmed by such a course. When proper treatment could be instituted at home, or in private, he believed it was wrong to inflict an irreparable wound on the feelings of the patient and friends, by the exposure inseparable from a residence in a public hospital. When it was desirable to make a change of scene, it could often be done without resort to a public institution.

Dr. JACKSON stated that, previously to his removal to the city,

he had practised as a physician for twenty-five years in Northumberland, where he knew everybody, and was aware of almost everything going on. During the whole of that period, only two cases of insanity occurred in that place, or in its immediate vicinity. One was in a man between thirty and forty years of age, who was a tailor by trade, and of industrious habits; the other was also in a male, an industrious carpenter, but who, on being appointed to an office in the county, became idle, lounging away his time in-doors. After an attack of bilious fever, insanity came on, and he was in consequence removed to the Pennsylvania Hospital. During his confinement there, which was for several years, his insanity gradually lapsed into idiocy; efforts were made to induce him to work, which were finally successful; his mind now gradually improved, and he was, finally, so far restored, that he went back to Northumberland, recommenced his trade, and up to this period has remained in the full possession of all his mental faculties.

Dr. EVANS observed that statistics, such as those of Dr. Jackson, were of very little value in determining the prevalence or non-prevalence of insanity in a community. Dr. Jackson is aware of the occurrence of only two instances of insanity, both in males, during his residence in Northumberland. Now, it happens that, during the very period alluded to, a lady from that vicinity was under Dr. E.'s care, insane. Insanity is one of those misfortunes which the immediate relatives of the individual in whom it occurs are extremely anxious to conceal. Instances have occurred where a member of a family has become insane, and the fact has been concealed, for a long period, from the most intimate friends.

Dr. JACKSON admitted the occurrence of the case referred to by Dr. Evans, though it had escaped his memory when he was up before. It was the case of a female who became deranged after parturition. Nevertheless, the lady did not reside in Northumberland, but in Sunbury.

Dr. REMINGTON observed that the beneficial effects of occupation in the treatment of insanity were often very surprising. A young man, L. B., after suffering a loss of vision in both eyes, became affected with melancholy, terminating in a violent form of

acute mania. He became furious and intractable, and persisted in lying upon a shed exposed to the rays of a hot sun and the night dews.

On Dr. R.'s first visit, he was bled copiously and afterwards purged, and a blister applied to the nape of his neck; under this treatment, conjoined with a kind and frank demeanor towards the patient, he rapidly improved, so that in a few weeks he was prevailed upon to engage in some employment, which consisted in turning the crank of a wheel for several hours each day.

He recovered the use of his reason entirely, and became an industrious and highly useful inmate of the blind asylum, where he died many years after from an attack of bilious fever.

Dr. PEPPER inquired of Dr. Evans whether he had any experience in relation to lunatics who refused to partake of food, and whether he had found any benefit to result from forcing food into the stomach in such cases. He had seen one instance that induced him to believe that the attempt to nourish the patient in this manner was productive of little or no benefit. Food was regularly introduced into the stomach by means of the stomach-pump, but with apparently no better effect than if it had not been done; the patient died of starvation.

Dr. EVANS had, for some years past, been convinced that it was the duty of the physician, in the cases referred to by Dr. Pepper, to force a proper amount of food into the stomach of the patients. In many instances, we shall, by so doing, be enabled to prolong the life of the patient sufficiently to allow his mental disease to abate or disappear. A common mistake, made in these cases, is giving food of too stimulating a character, or too much food at one time. It is often a difficult, and always an unpleasant, task to administer nourishment by a stomach-tube, and hence those having it to do are readily induced, when the tube is once introduced, to fill the stomach up, or force in a quart or more of rich soup with the hope that thereby the strength of the patient will be sustained or improved, and the operation need not be soon repeated. But the overdose counteracts the effect aimed at, and often aggravates the diseased condition from which the refusal to take food arises. In many of the cases in which the insane refuse to partake of food,

there exists a state of inflammation of the mucous coat of the stomach, acute or chronic; under such circumstances, to force into the stomach too much or improper articles of food would, of course, be decidedly improper; nevertheless, Dr. Evans would, even in these cases, advise moderate portions of the blandest aliment to be forced into the stomach, while, at the same time, he would endeavor to remove the gastric inflammation by rubefacients externally and other available remedies. Some insane patients have the faculty of rejecting the food introduced immediately after it has entered the stomach, by a species of singultus; one such case fell under the notice of Dr. Evans; these cases are of course hopeless—death from starvation being a necessary result.

Dr. Evans further remarked that it is a common hallucination with the insane, that there is a design on the part of those around them to destroy their life by mixing poison with their food—and hence results a determination on their part to abstain from eating and drinking. Dr. Evans has known patients who had refused to partake of any portion of food that was brought to them, induced to eat, by food—particularly fruit—being left about, as if by accident, in places where they would be certain to find it.

Dr. MORRIS stated that he had seen a case in the Pennsylvania Hospital, in which all food was refused, and when forced upon the patient by the stomach-pump was immediately rejected. This case terminated fatally at the end of six weeks. No trace of gastric inflammation was detected upon an examination of the body after death.

Dr. LEVICK remarked, that if so many errors are liable to be committed from the difficulty of arriving at a correct diagnosis of insanity, what shall we say of the evils which must inevitably flow from the different and contradictory views entertained in reference to its therapeutical treatment?

From some little experience, acquired during a residence with Dr. Kirkbride, in the hospital for the insane under his care, Dr. Levick had been convinced of the serious injury often done by physicians in the attempt *to cure insanity* by the use of the lancet—a mode of treatment so highly recommended by the earlier writers on this disease, and which is even now largely pursued by some practi-

tioners in this country—the distinction being too rarely made between the mania of acute inflammation of the brain, and that which is the result or accompaniment of other pathological conditions. He would respectfully ask Dr. Evans, whose experience is so extensive, for his views on this subject.

Dr. EVANS replied that insanity results from a variety of causes, and in different cases is associated with very different states of one or other of the organs of the body; consequently, no general and invariable plan of treatment can be adopted. The treatment demanded in each case must be determined by the indications presented by it. That bleeding and active depletion generally are rarely demanded, Dr. Evans was willing to admit; nevertheless, he must insist that cases of insanity do occur in which depletion is indispensable to insure the recovery of the patient.

To a question in relation to his experience in regard to the propriety of an early removal of the insane from their homes and families to an appropriate asylum, Dr. Evans replied that it was a common error that, in all cases, the recovery of the patient is rendered more speedy and certain the earlier he is removed to an asylum, and surrounded with strangers, after indications of insanity present themselves. Dr. Evans was convinced that there are a large number of cases that are rendered worse by such removal, and that a disordered condition of the intellect, which could have been better treated and readily controlled in the patient's own home, has not unfrequently been aggravated by his removal.

Samuel Gaye Morton

SUMMARY

OF THE

TRANSACTIONS OF THE

COLLEGE OF PHYSICIANS,

OF PHILADELPHIA.

FROM NOVEMBER 3, 1852, TO JANUARY 5, 1853, INCLUSIVE.

Stated Meeting, November 3, 1852.

Dr. WOOD, President, in the chair.

Present, thirty-six members.

Dr. JAMES L. TYSON was duly admitted a Fellow.

The Committee of Publication reported that they had issued the eighth No. of Vol. I. New Series, of the *Summary of Transactions.*

The Librarian reported the receipt from the Sydenham Society, London, of

Rokitansky's Pathological Anatomy, Vol. IV.

Annals of Influenza.

The Library Committee reported that, in obedience to a resolution of the College, they had purchased the following works:—

British and Foreign Medical Review, with General Index, Twenty-five volumes.

Morton's Crania Americana, 4to.

Guy's Forensic Medicine.

Busche on the Rectum.

Whytt on the Vital and Involuntary Motion of Animals.

Dr. GEORGE B. WOOD read the following:—

MEMOIR OF DR. SAMUEL GEORGE MORTON.

In accepting the appointment with which the College honored me, of preparing a biographical sketch of our late Fellow, Dr. Samuel George Morton, it may be remembered that I requested indulgence on the score of time; as the urgency of my then existing engagements rendered immediate attention to the duty impossible. The delay has been longer than I could have wished; but, happily, there was little occasion for haste, as the Academy of Natural Sciences, with which, through official position and long cooperation, Dr. Morton was more closely connected than with any other public body, had already provided for that commemoration which society owed to him, as to one who had faithfully and honorably served it. In what manner this duty was fulfilled need not be told to those who have perused the memoir prepared by Dr. C. D. Meigs, so characteristic of the author in its easy and copious flow of expression, its genial warm-heartedness, its glowing fancy, and the cordial, unstinted appreciation of the merits of its subject. It may be proper to mention here, that to this memoir I am indebted for many of the following facts. Having been prepared under the auspices of an association devoted to the natural sciences, though treating of our departed colleague with greater or less fulness in all his relations, it very appropriately directs a special attention to the scientific side of his life and character. With equal propriety, as appears to me, a professional body like the present may expect a particular reference to his medical history; and I shall, accordingly, endeavour to place him before you rather as a physician than as a man of general science. It was in the former capacity that Dr. Morton was best known to the writer, who had the honor of aiding in the conduct of his early medical studies, was afterwards for a time associated with him as a medical teacher, and, throughout his whole professional life, maintained with him a frequent and friendly intercourse.

The delineation which follows is necessarily in miniature; for, independently of the comparatively short time which can be devoted to such communications in the business of the College, the pages of our journal, to which it is customary in the end to consign them, are too limited to receive in its fulness a portraiture which might

readily be made to occupy volumes. I shall, however, endeavor, by excluding irrelevant commentary, and by expressing myself as concisely as possible, to introduce within the limits assigned the greatest practical amount of biographical matter.

Dr. Morton sprang from a highly respectable family, residing at Clonmell, in Ireland. His father, George Morton, the youngest of four brothers, emigrated at the age of sixteen to this country, with another brother somewhat older, who soon afterwards died. He settled in Philadelphia, and, having acquired the requisite experience in a counting-house in a subordinate capacity, afterwards engaged in mercantile business on his own account. Here he married Jane Cummings, a lady having a birthright in the religious Society of Friends, which, according to a well-known rule of that Society, she lost upon her marriage with one who was not a member, Mr. Morton belonging to the English Church. He died on the 27th of July, 1799, leaving his widow with three children, a daughter and two sons, the youngest of whom was the subject of the present sketch, and at that time an infant in arms. The older boy, James, was soon afterwards sent to an uncle in Ireland, who adopted him; but he died before maturity. The sister still survives to lament the loss of both her brothers.

Dr. Morton was born on the 26th of January, 1799, and was consequently about six months old at the death of his father. In her bereavement the widow sought consolation in religion, and still entertaining the faith in which she had been educated, applied for restoration of membership in the Society of Friends, and was received. With a view to be near a beloved sister, she removed from Philadelphia to West Chester, in the State of New York, but a few miles from the metropolis, where her sister resided. Wishing that her children should be brought up in her own religious faith, and surrounded in early life by those safeguards which are eminently provided by the discipline of Friends, she sought for their admission into the Society; and they were accordingly received as if members by birth.

Custom, if not positive rule, requires among Friends that children should as far as practicable be educated in schools under the care of the Society, so that their tender years may be protected until their principles shall have sufficiently taken root to resist the seductions of the world. As no school of this kind existed in her imme-

diate neighborhood, Mrs. Morton felt herself compelled, when no longer satisfied with her own tuition, to send her young son from home; and, for several years of her residence at West Chester, he was placed in one or another of the Friends' boarding-schools in the State of New York, where he acquired the usual rudiments of an English education.

At this early age, the boy evinced a literary turn of mind, being extremely fond of historical reading, and frequently trying his hand in writing verses, an exercise very useful to the young by giving them a command of language not so easily attained in any other way. I am told that his bent towards natural science was also received at this period. Among the visitors of his mother was Thomas Rogers, a gentleman belonging to the Society of Friends living in Philadelphia, who had a great fondness for mineralogy, and imparted a portion of the same fondness to the young son of his hostess, whom he delighted to take with him in his exploratory walks in the neighborhood.

The visits of Mr. Rogers resulted in his marriage with Mrs. Morton, and her return with him to Philadelphia along with her two children, whom he loved and treated as if they were his own. Dr. Morton always spoke in the kindest and most affectionate terms of his step-father. He was about thirteen years old when this change took place.

After the removal to Philadelphia, he was sent for a time to the famous boarding-school of Friends at West Town, in Chester County, Pennsylvania; and subsequently, in order to complete his mathematical studies, to a private school in Burlington, New Jersey, under the care of John Gummere, a member of the Society of Friends, and eminent as a teacher.

Having remained for one year under the instruction of Mr. Gummere, he left the school, in the summer of 1815, and entered as an apprentice a mercantile house in this city, in which he continued until the death of his mother in 1816.

His heart was not in his business; and, though there is no reason to believe that he neglected the duties of his position, he devoted most of his leisure hours to reading, and gave his thoughts rather to history, poetry, and other branches of polite literature than to mercantile accomplishment.

The last illness of his mother was protracted, requiring the fre-

quent attendance of physicians; and several of the most distinguished practitioners of Philadelphia were in the habit of visiting her professionally. Drs. Wistar, Parrish, and Hartshorne, were men calculated to impress favorably the mind of a bright, and at the same time thoughtful youth; and the attentions they paid to him, elicited no doubt by their observation of his intelligence and studious tendencies, had the effect of greatly strengthening the impression. His respect and affection for these eminent physicians naturally inclined him to their profession, and suggested the wish that he might be prepared to tread in their footsteps. This, I am informed, is what first directed his thoughts towards the study of medicine; though, as stated by Dr. Meigs, it is not improbable that the reading of the published introductory lectures of Dr. Rush may have been the immediate cause of his change of pursuit.

In the year 1817, being in the nineteenth year of his age, he entered as a pupil into the office of the late Dr. Joseph Parrish, then in the height of his practice, and distinguished as a private medical teacher. It was here that I first formed his acquaintance, being about to close my pupilage under the same preceptor, when he began his. As I was, soon after graduation, engaged by Dr. Parrish, to aid him in the instruction of his rapidly increasing class, I had, both as a companion and teacher, the opportunity of witnessing the industry and quick proficiency of the young student, and formed a highly favorable opinion of his general abilities. He attended the lectures in the University of Pennsylvania regularly, and, having complied with the rules of the institution, received from it the degree of Doctor of Medicine at the commencement in the spring of 1820.

During the period of his medical studies, he continued to reside with his step-father, and to this association probably owed in part his continued predilection for the natural sciences. It was to be expected from such a predilection, that he would give especial attention to Anatomy, which, indeed, he cultivated with much diligence and success. Similarity of taste and pursuit in this respect, led to a friendly association, about this period, with the late Dr. Richard Harlan, who superintended the anatomical studies of Dr. Parrish's pupils, and subsequently became distinguished as a naturalist.

Soon after his graduation, Dr. Morton became a member of the

Academy of Natural Sciences, thus commencing his professional career as a member of that body, over which he presided at the time of his death.

Having been pressingly invited by his paternal uncle, James Morton, of Clonmell, before commencing the practical duties of life, to pay a visit to his relatives in Ireland, and eager to improve both his professional knowledge and his knowledge of the world, he concluded to make a voyage to Europe, and accordingly embarked for Liverpool in May, 1820. On arriving in England, he proceeded immediately to Clonmell, where he spent about four months in a delightful intercourse with friends and relatives proverbially hospitable, improving in manners through the polishing influence of refined society, and cultivating his taste by varied reading. It is probable that, in this association, whatever bent his mind may have received from early education towards the peculiarities of Quakerism, yielded to the influences around him; for though, throughout life, he reaped the advantages of that guarded education in an exemplary purity of morals, and simplicity of thought and deportment, he connected himself subsequently with the Episcopal Church, to which his forefathers had been attached.

The uncle of Dr. Morton very naturally valued a European degree more highly than an American, and was desirous that his nephew, before entering on his professional career, should obtain the honors of the Edinburgh University. The Doctor yielded to his wishes, and left his Irish friends to enter upon a new course of medical studies at the Scotch capital. In consequence of exposure, in his journey from Dublin to Belfast, on the top of a coach, he was seized with an illness, believed to be an affection of the liver, which confined him for some time to his bed in Edinburgh, and probably served as the foundation of that delicacy of health, which attended him for the rest of his life. On his recovery, he commenced an attendance upon the medical lectures, and at the same time upon those of Geology, by Professor Jamison, thus showing that his attachment to natural science still continued.

Another attack of illness, early in the year 1821, interrupted his studies. Recovering from this, he made an excursion into the Highlands of Scotland, and afterwards returned to the relaxation and enjoyments of a residence among his friends at Clonmell.

In the autumn of the same year, he made a journey to Paris,

where he spent the winter very profitably in the prosecution of his studies, and in improving his knowledge of the French language.

In the following spring, he left Paris upon a tour through France, Switzerland, and Italy, in which he consumed the summer.

In the autumn of 1822, we find him again at Edinburgh, where he continued through the winter, attending lectures, making up for early deficiencies in classical education by the study of Latin, and otherwise preparing himself for graduation. Having written and presented a thesis in Latin, *De Corporis Dolore*, and undergone satisfactorily an examination on medicine in the same language, he received the honors of the University in August, 1823.

He had thus been six years occupied, more or less steadily, in the study of medicine, carrying on, during the same period, a process of self-education, which more than compensated for the deficiencies of his early life, and attaining a proficiency in various branches of natural science, which contributed greatly to his future eminence.

In June, 1824, he bade farewell to his friends in Ireland, and, returning to Philadelphia, immediately engaged in the practice of his profession.

His success was gradual. Young physicians are apt to complain of their slow progress in a remunerative business; but what they consider a misfortune, is in fact, if properly used, a blessing. Their early years have been devoted to the acquisition of elementary knowledge, their later will be occupied by practical duties. It is in the intermediate period that the opportunity is offered of extended research into the records of science, of confirming or correcting the results of reading and study by observation, of making original investigations into the worlds of matter and of thought, and thus bringing forth to the light truths which may benefit mankind, and at the same time serve as the basis of honor and success to their discoverer. He who leaps at once from professional study into full professional action, finds all his time and powers occupied in the application of the knowledge already attained, and seldom widens materially the circle of science, or attains higher credit than that of a good, or a successful practitioner. It was undoubtedly fortunate for Dr. Morton's reputation, that his time was not, at the outset, crowded with merely professional avocations. He had thus the opportunity of going out into the various fields of natural science; and, while he neglected none of the means requi-

site to the honorable advancement of his business as a physician, he pushed his researches and labors in those fields to the most happy results.

As an aid and stimulus to his researches in this direction, he entered at once into hearty co-operation with his fellow members of the Academy of Natural Sciences, and took an active part in the affairs of that Institution. He was almost immediately made one of the auditors; in December, 1825, was appointed to the office of Recording Secretary, which he held for four years; served actively for a long time on the Committee of Publication; aided materially in increasing and arranging the collections; delivered before the Academy lectures on Mineralogy and Geology during the years 1825 and 1826; drew up a report of its transactions for these two years; and began a series of original papers upon various subjects of natural science, which have contributed greatly to his own credit, and that of the Institution.

His first medical essay was on the use of cornine in intermittent fever, and was published in the *Philadelphia Journal of the Medical and Physical Sciences* (xi. 195, A. D. 1825). Under the name of cornine, a material had been given to him, purporting to be an alkaline principle extracted from common dogwood bark, and, having been used by him in several cases of intermittent fever, proved to be an efficacious remedy. Dr. Morton was responsible only for the correctness of his own statements as to the effects of the substance given to him, and not for its chemical character, which must be admitted to be at best doubtful. Positive proof is still wanting of the existence of any such active alkaline principle.

His first strictly scientific papers were two in number, both read on the 1st of May, 1827, before the Academy of Natural Sciences, and afterwards printed in the *Journal* of the Academy. They were entitled respectively, "Analysis of Tabular Spar, from Bucks County, Pennsylvania, with a notice of various minerals found at the same locality," and "Description of a new species of Ostrea, with some remarks on the Ostrea convexa of Say."

These were followed in rapid succession by other scientific communications; and the *Transactions* of the Academy continued to be enriched by his labors from this date till within a short period before his death. There were not less than forty of these contributions, besides others to the *Transactions* of the American Philo-

sophical Society, and the *American Journal of Science and Art*, edited by Professor Silliman. They were on the various subjects of mineralogy, geology, organic remains, zoology, anatomy, ethnology, and archaiology; and, by their diversified character, richness in original matter, and accuracy and copiousness of description, speak more strongly than could be done in mere words of the industry, scientific attainments, powers of observation, and truthfulness of their author.*

But, in this slight sketch of his contributions to periodical works of science, I have been anticipating the course of his life, and must return to a period but shortly subsequent to the commencement of these labors.

He had at that time considerably widened his social circle, had formed intimacies with many persons of distinction in science and in the common walks of life, had become favorably known in the community at large, and was rapidly extending his business as a practitioner of medicine. Only one thing was wanting to give permanence to his well-being, by affording a point towards which his thoughts and energies might ever tend, as the centre of his life. This want was supplied by his marriage, October 23, 1827, with Rebecca, daughter of Robert and Elizabeth Pearsall, highly respected members of the Society of Friends, originally of New York, but at that time residing in Philadelphia. This connection was, in all respects, a most happy one for Doctor Morton. He secured by it not only a devoted companion, who could appreciate, if not participate in, his pursuits, and lighten by sharing with him the burthens of life, but the blessing, also, of a loved and loving family, which gave unwearied exercise to his affections, and sustained a never-ceasing strain of grateful emotion, that mingled sweetly with the toils, anxieties, and successes of his professional career, and gave an otherwise unattainable charm to his intervals of leisure.

It is reasonable to suppose that his professional business was increased by his marriage. That he possessed, in some measure, the confidence of the public as a practitioner, is shown by his appointment, in the year 1829, as one of the physicians to the

* For a catalogue of these and of the other works of Dr. Morton, the reader is referred to the Appendix of the Memoir prepared by Dr. Meigs.

Philadelphia Almshouse Hospital. Here he enjoyed ample opportunities for pathological investigations, of which he availed himself extensively, especially in relation to diseases of the chest, towards which his attention had been particularly directed by attendance on the clinical instructions of Laennec, during his stay in Paris. The fruit of these investigations will be seen in a work which will be more particularly noticed directly.

In the year 1830, Dr. Morton added to his other duties those of a medical teacher. A brief notice of the association with which he was connected may not be amiss; as it was one of the first of those organizations, now familiar to the profession in Philadelphia, in which a number of physicians unite in order to extend to their private pupils advantages, which, separately, it would be impossible for them to bestow. It is quite unnecessary that I should speak of the benefits which have accrued from this plan of instruction to the profession in the city. Most of those who now hear me have, I presume, been taught under that system, and some are at this moment teachers. You can, therefore, appreciate its advantages; but it is only the older among you who can do so fully, as it is only they who can compare it with the irregular and inefficient plan of private tuition that preceded it. Another incidental advantage has been the training of a body of lecturers, from among whom the incorporated schools have been able to fill their vacant professorial chairs with tried and efficient men, and thus to sustain, amidst great competition, the old pre-eminence of Philadelphia as the seat of medical instruction.

The late Dr. Joseph Parrish, from the increasing number of his office pupils, was induced to engage the services of a number of young medical men, to aid him, by lectures and examinations on the different branches of medicine, in the education of his class. This arrangement was in efficient operation for several years, but was at length superseded by another, in which all the teachers were placed on a footing of perfect equality, the private pupils of each one of them being received on the same terms, and those of other private teachers, not belonging to the association, being admitted on moderate and specified conditions. It was in January, 1830, that this little school was formed. In accordance with the simple tastes of its most prominent member, it took the modest name of "Philadelphia Association for Medical Instruction," a title which still survives in

a highly respectable existing summer school, though the original association has long been dissolved. The first lecturers were the late Dr. Joseph Parrish on the practice of medicine, Dr. Franklin Bache on chemistry, Dr. John Rhea Barton on surgery, Dr. Morton on anatomy, and myself on materia medica. About the same time, another combination of the same character was formed, denominated, I believe, the "School of Medicine," in which Dr. C. D. Meigs taught midwifery. By an arrangement, mutually advantageous, the services of Drs. Bache and Meigs were interchanged; the pupils of the "Association" attending the lectures of the latter on midwifery, and those of the "School of Medicine" the chemical instructions of the former. Dr. Morton continued to deliver annual courses on anatomy in this association for five or six years, when it was dissolved. His instructions were characterized by simplicity and clearness, without any attempt at display, and, so far as I have known, gave entire satisfaction both to his associates and pupils.

On the 28th of November, 1831, he was chosen Corresponding Secretary of the Academy of Natural Sciences, and was thus brought into official communication with many scientific men in Europe and America.

Reference was a short time since made to a work based mainly upon his pathological investigations in the Almshouse Hospital. It was denominated "Illustrations of Pulmonary Consumption," was printed in the early part of 1834, and contributed no little to the increase of his reputation as a practitioner. The work is an octavo of about 180 pages, treats of phthisis in all its relations, and is illustrated by several painted plates, executed with skill and accuracy. At that time little was known in this country of the admirable work of Louis on Consumption, and the book of Dr. Morton no doubt contributed to the spread of sound views, both pathological and therapeutical, upon the subject. He particularly insists on the efficacy of exercise in the open air in the treatment of the disease, following in this respect in the footsteps of his preceptor, Dr. Parrish, to whose memory great honor is due for his successful efforts to revolutionize the previously vague and often destructive therapeutics in phthisis.

Very soon after the publication of this work, in the year 1834, Dr. Morton had an opportunity of making a voyage to the West Indies, as the companion and medical attendant of a wealthy

invalid. On this occasion he visited several of the islands, making observations as he travelled in relation to their geological structure, and at the same time investigating, with peculiar attention, the influence of their climate upon phthisis, and their relative fitness as places of resort for consumptive patients from colder regions.

Some time after his return from the West Indies, he edited an edition of Mackintosh's *Principles of Pathology and Practice of Physic*, adding explanatory notes, and making numerous additions to supply deficiencies in the original work. A second American edition was published in 1837, under his supervision.

When it was that he began to turn his attention especially to ethnological studies I am unable to say; but it is probable that the idea of making a collection of human crania, especially those of the aboriginal races of this continent, both ancient and modern, originated soon after he entered into practice, if not even previously; and among the earliest recollections of my visits to his office is that of the skulls he had collected. It is well known to you that much of his time and thoughts, and not a little of his money, were expended in extending and completing this collection, in which he was also materially assisted by his own private friends, and the friends of science in general, who were glad to contribute their aid to so interesting an object. The cabinet thus commenced was gradually augmented, embracing the crania of the lower animals as well as those of man, until at length it grew to a magnitude almost beyond precedent; and, at this moment, it forms one of the greatest boasts of our country in relation to natural science. It is ardently to be hoped that means may be found to secure its retention here, and that it may ever continue to enrich the varied collections of our Academy, among which it has been deposited.*

The possession of such materials naturally led to the wish to give diffusion and permanence to the knowledge which they laid open. Hence originated Dr. Morton's great work on *American Crania*, in which accurate pictorial representations are given of a great number of the skulls of the aborigines of this continent, with descriptions, historical notices, and various scientific observations;

* I have been informed, on the very best authority, that, independently of all the assistance in making the collection afforded by others, it cost Dr. Morton somewhere between ten thousand and fifteen thousand dollars.

all preceded by an essay on the varieties of the human species, calculated to give consistency to the necessarily desultory statements which follow. The preparation of this work cost the author a vast deal of labor, and an amount of pecuniary expenditure which has never been repaid, unless by the reputation which it gained for him, and the consciousness of having erected a monument to science, honorable to his country, and likely to remain as a durable memorial of his own zeal, industry, and scientific attainment. It was published in 1839. It is due to Dr. W. S. W. Ruschenberger to state, that the work was inscribed to him by Dr. Morton, with the acknowledgment that some of its most valuable materials were derived from his researches in Peru.

In September, 1839, Dr. Morton was elected Professor of Anatomy in the Pennsylvania Medical College, the duties of which office he performed until November, 1843, when he resigned. In this Institution he was associated with the late Dr. George McClellan, who may be looked on as its founder, and for whom he formed a friendship which ended only with life.

On the 26th of May, 1840, he was elected one of the Vice-Presidents of the Academy of Natural Sciences, in which capacity he very often presided at its meetings, in the absence of the President.

He was engaged about this time in preparing a highly interesting memoir on the subject of Egyptian Ethnography, based mainly upon the observation and comparison of numerous crania, in the collection of which he was much aided by Mr. George R. Gliddon, whose residence in Egypt gave him opportunities, which an extraordinary zeal in all that concerns the ancient inhabitants of that region, urged him to employ to the best possible advantage. This memoir was embraced in several communications to the American Philosophical Society, in the years 1842 and 1843, which were published in the *Transactions* of that Society (Vol. IX., New Series, p. 93, A. D. 1844), and also in a separate form under the title of "Crania Egyptiaca, or Observations on Egyptian Ethnography," with handsomely executed drawings of numerous skulls derived from the pyramid of Saecara, the necropolis of Memphis, the catacombs of Thebes, and other depositories of the ancient dead in that region of tombs.

In January, 1845, Dr. Morton was elected a Fellow of this

College. That we did not more frequently see him among us, was probably owing to the unfortunate coincidence, at that time existing, of the meetings of the College and Academy, which would have rendered necessary a neglect of his official duties in the latter institution, had he attended at the sittings of the former. It may be proper here to mention, though not in strict chronological order, that, by the appointment of the College, he prepared a brief biographical sketch of Dr. George McClellan, which was read in September, 1849, and published in the *Transactions* of that date.

In the years 1846 and 1847, he prepared essays "On the Ethnography and Archæology of the American Aborigines," and "On the Hybridity of Animals and Plants in reference to the unity of the human species," which were read before the Academy, and afterwards published in the *American Journal of Science and Arts* (III., 2d ser., A. D. 1847). In these papers he advanced opinions upon the origin of the human family, which led to an unfortunate controversy, that, with his delicacy of feeling, could not but have in some measure disturbed the tranquillity of the latter years of his life. It is due to Dr. Morton to say, that he did not consider the views advocated by himself as conflicting with the testimony of Scripture, or in any degree tending to invalidate the truths of revealed religion.

During the year 1848, much of his time was devoted to the preparation of an elementary work on "Human Anatomy, Special, General, and Microscopic," illustrated by a great number of figures, and aiming to be an exposition of the science in its present improved state. Among his inducements to this work, not the least, as he states in the preface, was the desire to be enrolled among the expositors of a science that had occupied many of the best years of his life. Though laying no claim to originality in its facts or illustrations, the treatise cost him a great deal of labor, not only in the arrangement of the matter, the care of the engravings, and the superintendence of the press, but also in the verification, by microscopic observation, of the accuracy of the pictorial representations of minute structure in which it abounds. It was issued from the press early in 1849; but, even before its publication, he had begun to feel the effects upon his health, never robust, of the toilsome task he had undertaken, in addition to pro-

fessional and official engagements, which alone would have been sufficient for the wholesome employment of his time and energies.

Scarcely had his last duties in connection with this work on Anatomy been performed, when, in December, 1848, he was attacked with a severe pleurisy and pericarditis, which brought him into the most imminent danger of life, and from the effects of which he never fully recovered; for though, after a long confinement, he was enabled to go about, and even to resume his professional duties, he was left with great and permanent derangement of his thoracic organs.

The very obvious depression of his left shoulder, and the falling in of the corresponding side of the chest evinced, at a glance, that with the absorption of the pleuritic effusion the lung had not expanded; and the loud murmur, obvious upon auscultation over the heart, proved to his professional friends that this organ had not escaped without serious injury. Notwithstanding, however, the amount of local derangement, his system rallied, and after an absence of some weeks from the city, he returned so much improved in health and strength, that he felt himself authorized to resume his active professional avocations and general previous course of life, though with some abatement of his labors in the fields of original investigation and of authorship.

Could his sense of duty at this period, and the disposition to strong mental activity, which had probably become by habit almost a necessity of his nature, have permitted him to withdraw from all vigorous exertion, and to devote his time for the future rather to quiet enjoyment than to laborious effort, it is not impossible that his life might have been considerably prolonged. Such was the advice of some of his medical friends; but stronger influences impelled him to exertion; and, like most men who feel themselves irresistibly drawn into a certain course of action, he succeeded in reconciling this course not only to his general sense of duty, but even to his views of what was required under the particular circumstances of his health. He was convinced that by active bodily exertion he should be most likely to bring his defective lung back again to the performance of its function; and certainly, for a time, his improving appearance and increasing strength under exercise seemed to justify the system he had adopted.

Before adverting to the closing scene, let us stop for a very few

minutes to take a view of his character and position at this period, which, if the consideration of his health be omitted, was the most prosperous of his life.

His election to the presidency of the Academy of Natural Sciences, which took place December 25, 1849, had given him an official position than which he could not expect to gain one more honorable, and than which society in this country have few more honorable to bestow. Of an amiable and benevolent temper, indisposed to give offence, or to wound the sensibilities of others, he had conciliated general good-will; while his affectionate disposition, his deep interest in those to whom he was attached, and his readiness to serve, secured him warm friends, especially in the circle of his patients, who in general had much affection for him personally, as well as great trust in his skill. Powers of quick and accurate observation, and a sound cautious judgment were perhaps his most striking intellectual characteristics, and naturally led him into those departments of science where they could be most efficiently exercised.

By strict attention to his professional duties, even in the midst of his scientific researches, by an affectionate interest in his patients, inspiring similar sentiments on their part, and by a system of cautious but successful therapeutics, he gained a large, and for Philadelphia, a lucrative practice, which, with some income derived by inheritance from an uncle in Ireland, enabled him to live handsomely, and not only to entertain his scientific friends and associates on frequent occasions at his house, but also to extend hospitalities to strangers whom his reputation attracted towards him upon their visits to our city. His friends will not soon forget the weekly *soirées*, at which they enjoyed the pleasure of combined social and scientific intercourse, and had the frequent opportunity of meeting strangers distinguished in the various departments of learning and philosophy.

His extensive professional relations, and his reputation both as a practitioner and teacher of medicine, attracted to his office many young men disposed to enter into the profession; and he usually had under his charge, towards the close of his life, a considerable number of private pupils to whom he devoted much time, and his most conscientious endeavors to qualify them to be good physicians.

Numerous learned and scientific associations in different parts of America and Europe had enrolled him among their members, and perhaps few men in this country had a more extensive correspondence with distinguished individuals abroad.* To be praised by the praised is certainly a great honor; and this Dr. Morton was happy enough to have won in no stinted measure.

With these meritorious qualities, these well-earned distinctions, and these diversified sources of comfort and enjoyment, with the crowning pleasures, moreover, of domestic confidence and affection, and bright hopes for a rising family, our late friend and fellow-member may be considered, at this period of his life, as one of the most happy of men in all his exterior relations. The only drawback was the uncertain state of his health.

From early manhood he had been of delicate constitution. Two attacks of severe hæmatemesis had on different occasions threatened his life; and for a long time he suffered much with excruciating attacks of sick headache, which most painfully interrupted his scientific and professional avocations, and not unfrequently confined him for a time to his bed. For many years of his earlier life, his pale complexion and spare form indicated habitually feeble health; but at a more advanced period he seemed to have greatly improved in this respect, exhibiting a more healthful color and more robustness of frame; and, but for the terrible attack which prostrated him in the winter of 1848–49, there seemed to be no reason why he should not live to a good old age. But the fiat had gone forth; and, though a respite was granted, it was destined to be short.

A painful incident which happened about this time may possibly have had some effect in aggravating the morbid tendencies already unhappily strong. I refer to the illness and speedy death, in May, 1850, of an affectionate, dearly loved, and highly promising son, to whose future he was looking forward with much, and apparently well-founded, confidence.

Perhaps at no time was Dr. Morton more busily occupied in practical duties than during the year or two which preceded his death. He was indefatigable in attendance upon his numerous

* For a list of the societies of which he was a member, see the Appendix to Dr. Meigs's Memoir.

patients, devoted no little time to the instruction of his private pupils, and never voluntarily omitted the performance of his academic functions. In the midst of this career of usefulness, he was seized with an illness, which, commencing on the 10th of May with a moderate headache, became more severe on the following day, and, though afterwards relaxing so much as to give hopes of a return to his ordinary health, ended in an attack of stupor and paralysis, which proved fatal on the 15th, the very day upon which, one year previously, he had witnessed the death of his son.

Dr. Morton was considerably above the medium height, of a large frame, though somewhat stooping, with a fine oval face, prominent features, bluish-gray eyes, light hair, and a very fair complexion. His countenance usually wore a serious and thoughtful expression, but was often pleasingly lighted up with smiles during the relaxation of social and friendly intercourse. His manner was composed and quiet, but always courteous, and his whole deportment that of a refined and cultivated gentleman.

He left behind him a widow and seven children, five sons and two daughters, several of whom have advanced to adult age, and are engaged in active life. In the remembrance of the virtues, the attainments, the fruitful labors, and the well-earned reputation of the husband and father, they have a legacy far more precious than the gifts of fortune; an inheritance which no mischances of this world can impair, and which will be handed down as a priceless heirloom to their latest posterity.

Dr. HAYS remarked that, about a year ago, Dr. Bond presented to the College a splint he had invented for the treatment of fractures at the lower end of the radius, which, since then, has been much used and generally approved. Last month he was called to a lady who had fractured the lower end of the radius of her left arm, and, not being able, at the time, to procure one of Dr. Bond's splints, he resorted to a temporary substitute, which was found to answer so well that he was induced to continue it during the entire period that a splint was required. Believing it will be found an useful substitute for the splint of Dr. Bond, and being composed of materials which can always be readily procured, and as it may be made in a few minutes, Dr. Hays thought that a description of it might not be uninteresting to the Fellows of the College. It will, he

thinks, fulfil every indication quite as well as that of Dr. Bond, than which it is much lighter.

It was made as follows:—

The lid of a cigar-box was cut into the shape represented in Fig. 1.

Fig. 1.

Over this was laid a double layer of cotton-wadding. A strip of muslin, six yards long, and three inches wide, was rolled up to within two yards of its end, and then each edge secured by a pin, not placed opposite to each other, but one a little nearer to the loose end than the other, so that the roll made, with the straight piece, an angle, corresponding with that at the lower end of the splint. The roll being then placed on this end of the splint, the strip was carried over the back, then turned over the front over the roll, and returned again to the back, when the angle at the lower edge of the splint gave to the muslin strip a direction which carried it over the edge and in front of the roll to the opposite edge. The strip was then continued over from edge to edge of the splint until the whole was covered. (See Fig. 2.)

Fig. 2.

The apparatus was then completed. The roll answers for the palmar block in Dr. Bond's splint.

The splint is secured upon the arm by a simple roller-bandage.

As represented in Fig. 2., the splint is designed for the left arm; it can be arranged for the right one by placing the roll on the opposite side.

Dr. HAYS remarked, that several communications had recently appeared in reference to the efficacy of the seeds of the pumpkin in cases of tapeworm. He had, in consequence, a short time since, recommended their employment in a case at Wills Hospital. At first, the dried seeds were used and produced no effect. Subsequently, two ounces of the recent seeds, bruised in a mortar with sugar, were given in four doses at intervals of an hour, and the next morning one ounce more. In half an hour after the last dose, about nine feet of tapeworm were discharged. The head of the worm was not detected, but the symptoms indicative of the presence of the worm, subsequently entirely disappeared.

The following Fellows were elected members of the publishing Committee, for the ensuing twelve months: SAMUEL JACKSON, ALFRED STILLE, W. S. W. RUSCHENBERGER.

Stated Meeting, December 1, 1852.

Dr. WOOD, President, in the chair.

Present, thirty members.

Dr. HALLOWELL presented to the Library a copy of his Descriptions of New Species of Reptiles inhabiting North America.

YEAST IN DIABETES.

Dr. WOOD stated that he had a case of diabetes now under treatment in the Pennsylvania Hospital, which, in the results thus far obtained, was not without interest in a therapeutic point of view. He would first present a brief sketch of the case, drawn up by his young friend, Dr. R. A. F. Penrose, one of the resident physicians of the hospital, and would then offer a few remarks.

"Mary Ann Cain, born in Ireland, a domestic, aged thirty, was admitted into the hospital, November 16, 1852, for palpitation of the heart. Upon examination, the heart was found acting with unusual energy and quickness; but the sounds were normal. Her

general condition was one of extreme emaciation, her weight eighty-three pounds, the pulse frequent but not strong, the tongue red and smooth. She stated that she suffered much from constant thirst, and had a perpetual desire to eat. Attention was directed to the urine; and it was found that she was passing from 18 to 20 pints daily, of a specific gravity varying from 1036 to 1040. On the addition of yeast, it fermented briskly. Boiled, after the addition of solution of sulphate of copper and solution of caustic potassa, it yielded a reddish-brown precipitate; boiled with solution of potassa alone, it acquired a dark-brown or bistre tint. The case was clearly one of saccharine diabetes.

"Two days after admission, she was placed upon an animal diet, with non-farinaceous vegetables, and one small biscuit three times a day. Cod-liver oil was also directed, and *a teaspoonful of yeast, three times daily, immediately before meals.*

"22*d*. The quantity of urine now passed in 24 hours was 10 pints, and the specific gravity 1022. The thirst and appetite were much diminished. The same treatment was continued.

"27*th*. The patient complained of total loss of appetite, and could not take her cod-liver oil. The tongue was extremely red and inclined to dryness, and there was pain on pressure in the epigastrium. The quantity and sp. gr. of the urine were as at the last date. The cod-liver oil and animal diet were suspended, and she was placed upon farinaceous drinks with milk. A pill, composed of one grain of the blue mass and a quarter of a grain of opium, was directed four times a day, and the yeast was continued.

"30*th*. The patient felt much better, her tongue was moister and less red, and the gastric symptoms were much ameliorated. Not finding milk to agree with her, she had lived chiefly on oatmeal gruel, with a soft-boiled egg occasionally. The quantity of urine had now been reduced to 7 pints in twenty-four hours, and its specific gravity to 1020.

"31*st*. The patient continues as yesterday, the urine having amounted, in the last period of twenty-four hours, to only six pints; the specific gravity not examined."

Much light, Dr. Wood observed, had recently been thrown upon the pathology of diabetes. The disease is now admitted to be characterized by sugar in the blood, the kidneys being only secondarily affected. The experiments of McGregor proved that sugar exists in great excess in the stomach of diabetic patients after eating, and it may readily be supposed to pass thence into the circulation. Bernard has shown that the liver, in its normal action, produces sugar out of the portal blood, and that this sugar passes through

the vena cava, right side of the heart, and pulmonary arteries into the lungs, where, in the healthy state, it is wholly consumed. Excess in the sugar-producing action of the liver, or deficiency in the sugar-consuming action of the lungs, may be followed by the entrance of saccharine matter into the general circulation, and thus give rise to diabetes. The same physiologist proved that, by irritating a certain point of the medulla oblongata, the liver was made to generate a great excess of sugar, which, escaping decomposition in the lungs, entered the arterial circulation, and passed out with the urine.

We thus perceive that there may be various sources of the saccharine impregnation of the blood. *In the first place*, it may arise from some defect in the gastric digestion, in consequence of which farinaceous and other nutritive substances are converted into glucose or grape-sugar, which remains unchanged; or, *secondly*, from hypertrophy or other disease of the liver causing an over-activity in its sugar-producing function; or, *thirdly*, from disease of the lungs impairing their power of consuming the sugar; or, *fourthly*, from irritation of the nervous centre in the medulla oblongata which appears to control the action of the liver in relation to this product; or, *lastly*, from two or more of these sources combined.

Now, in the case before us, no organic affection of the liver or of the lungs could be detected, and there was no reason to suspect the medulla oblongata; but the smooth reddened state of the tongue, and the epigastric tenderness seemed to point specially to the stomach as the seat of the disease.

In the number of the *Edinburgh Monthly Journal of Medical Science* for October last, it is stated that Dr. Gray, of Glasgow, had been induced to make trial of *rennet* in a case of diabetes, in the hope that, as this body converts sugar out of the body into lactic acid, it might be found to produce a similar change within the stomach; and the lactic acid thus generated might be eliminated from the system, or rather decomposed by the respiratory process. In the case referred to, the urine was copious, of the specific gravity 1045, and strongly saccharine. A teaspoonful of *rennet* was given three times a day. In eight days, the specific gravity of the urine was reduced to 1025, with but a trace of sugar; in twenty-five days, the quantity was four pints, and the density 1022.5, and no sugar could be detected. At the end of six weeks, the urine re-

mained free from sugar, and the patient had so far improved in health and strength as to return to his work.

It occurred to me, observed Dr. Wood, from the results of this case, that yeast might prove equally beneficial, by causing a decomposition of the sugar in the stomach such as it is well known to occasion out of the body, resulting in the production of acetic acid. Being under the impression that, in the case now reported to the College, the primary disease probably resided in the stomach, and that the diabetic sugar was generated there, I determined to try the effects of this remedy. The patient had been two days in the house before she was placed under treatment, and during this period no change had taken place in the quantity or character of the urine. It will have been noticed that quickly after the commencement of treatment, a very great change took place in both these respects, the quantity of urine being reduced, in the course of four days, from twenty pints to ten daily, and the specific gravity from 1036 or 1040 to 1022. But the almost exclusive use of animal food may be supposed to have contributed to this result. In consequence, however, of the gastric inflammation, it was necessary to suspend this diet, and to allow the patient to use farinaceous food, the yeast being continued. So far from any increase of urine in consequence of this change of diet, its quantity was still further reduced, so that, upon the last day upon which it was examined, it did not exceed six pints, while the specific gravity was as low as 1020, the quantity having thus been reduced from twenty pints to about double that of health, and the density from 1040 to that of normal urine. There can be no doubt whatever that the sugar has been very greatly diminished; and there is no cause apparent to which the result can be ascribed except the use of yeast.

What may be the further progress of the case cannot, of course, be foreseen. Even should we succeed in preventing altogether the elimination of sugar with the urine, it does not follow that the case will end in recovery. The remedy is addressed only to one of the effects; a very important effect, it must be admitted, and itself capable of producing great mischief, but still by no means the whole disease. Nevertheless, if, by the steady use of a remedy so little disagreeable as yeast, we can prevent the abnormal production of sugar, and the exhausting effects on the system of the excessive secretion of urine occasioned by it, we shall have gained one grea

point. We shall at least gain time for accurately investigating the source of the evil, and applying such remedies as may offer a reasonable hope of permanent benefit.

Dr. Wood observed, finally, that he should probably take occasion, at a future meeting of the College, to report the further progress of the case; and should have been in less haste at present, had he not thought that the remedial measure had some claims to notice, and been desirous that it should, as quickly as possible, receive an ample trial, so that its merits might be conclusively tested.

Dr. EDWARD HALLOWELL read the following

REMARKS ON THE BITES OF VENOMOUS SERPENTS, WITH CASES.

CASE I.—Don B. P., age 55, sanguine nervous temperament, of spare form, temperate habits, and general good health, residing on the River Parana, a tributary of the La Plata, South America, was, on the night of 2d January, 1850, thermometer (Reaumur) 23°, bitten by a small viper* on the dorsum of the foot. The usual remedies of the peasantry were applied, viz., a ligature around upper part of leg, and the wound was incised and washed with a decoction of viper-wood, which wood the patient chewed; he also swallowed a draught made of the blood of the chicken-cock, garlic, and wine; two hours afterwards he took a dose of castor-oil, and was brought to the neighboring city.

January 3, 7½ A. M., he was seen by his physician, and his state thus described: Wounded foot and lower third of leg much swollen; two spots of ecchymosis near the wound, from which a small quantity of sanies was flowing; pain trifling, conjunctivæ injected; countenance sad, but preserving its natural color (rosy); he is constantly expectorating dark-colored blood; this expectoration commenced one and a half hours after being bitten; there are three small wounds on his tongue, giving out blood (patient attributes these wounds to the viper-wood which he chewed); gums swollen, and blood oozing from them; the fauces appear to be in same state, but cannot well be seen for the blood which constantly covers them; patient urinated in presence of his physician 10

* Called, vulgarly, Viper of the Cross.

ounces of urine and blood, the latter settling into soft clots. Pulse small, 100. Treatment: The wound was cauterized with the actual cautery, and dressed with liniment of ammonia; two drops of liquor ammoniæ were administered every hour in cinnamon water, and warm diluents freely given. 9½ A. M. Perspiring; black fetid alvine evacuation; pulse, 116; other symptoms same. 11 A. M. Pulse 124; expectoration not so abundant. 5 P. M. Foot and leg more swollen, former covered with patches of ecchymosis; heat of affected leg greater than of sound one; pulse very small, 132; his thirst not at all urgent. 9½ P. M. The swelling has reached the thigh; pulse 116; other symptoms same; suspend ammonia; ordered lemonade.

4th, 8 A. M. Slept 2½ hours; expectoration less; urine same; no clot shreds like fibrine; ecchymosis extending up the leg; pulse 112, not so small; spirits of camphor applied to leg.

5 P. M. Foot and leg cold; ecchymosis extending; foot livid; phlyctæna are seen near the wound; expectoration has almost ceased; urine same; face pale; suspend camphor, and use liniment of ammonia, wine with lemonade.

10 P. M. Heat of foot and leg natural; whole of thigh swollen; inguinal glands enlarged and hard; pulse 104; suspend wine; rest same.

5th, 8 A. M. Slept 5 hours; acute pain in right lumbar region; slight renewal of bloody expectoration; swelling less; urine same; inguinal glands not sensible to pressure; expression of countenance better; foot not so dark; has full power over limb, moving it at pleasure; ecchymosis still extending. Treatment: Frictions of hot olive oil over pain in lumbar region; wine *pro re nata;* bowels kept open by injections.

7 P. M. Two alvine evacuations during the day, of the color and consistence of tar; colicky pains; urinates every four or five hours about ten ounces, much of which *appears* to be blood; swelling gone from thigh; leg still swollen; heat greater than that of other; rest same.

6th, 7 A. M. Passed a bad night; three tar-like evacuations; colicky pains; slight meteorism; abdomen sensible to pressure; tongue clean and moist; patient feels like fainting on sitting up; spirits much depressed; pulse 84, weak; rest same.

7*th*, 8 A. M. Pulse 100; patient desponding; general malaise; sensations of fainting; rest same.

8*th*, 8 A. M. Tongue clean and moist; pulse small, 96; pain in right hypochondrium, extending to right groin; sensible to pressure; ecchymosis on right breast, right side, and other parts of trunk; has passed, during last 24 hours, 40 ounces urine; no coagula, but some whitish fibrous masses,* of a tubular form; color of urine, dark claret, with some oily particles swimming on surface. Treatment, in consultation: One ounce oil turpentine, in eight ounces of emulsion, one-fourth to be taken in the course of the day, in doses of three drachms; watermelon-seed water as drink; bandage to leg and foot; warm fomentations to abdomen.

9*th*, 8½ A. M. Has passed 36 ounces urine; color deeper; same fibrine-like masses which, from shape, have probably passed along ureters, causing pain in right lumbar and iliac regions; pulse 108; rest same.

10*th*, 6½ A. M. Pains not so great; urine contains but little blood, which settles at bottom, leaving supernatant liquid clear; odor of turpentine perceptible in urine; face has a slight yellow tinge; no thirst; pulse 104; patient much depressed in mind; rest same.

5 P. M. Patient in better spirits; turpentine causes him to vomit; very little blood (light red) in urine; suspended turpentine, ordered comp. tinc. gentian; wine and water *pro re nata;* rest same.

11*th*, 8 A. M. Has slept well, free from pain; two alvine evacuations (liquid yellow). Treatment: Suspend fomentations, and take now and then turpentine emulsion; allowed roast chicken.

12*th*. Urine contains no blood; color natural; has slept well; suspended turpentine. Patient continued to improve until 14th; was then attacked with diarrhœa; ten alvine evacuations in twelve hours; pulse 96, small; cataplasms were applied to abdomen; diet, rice water.

15*th*. Diarrhœa ceased about midnight; patient weak; pulse 116; farinaceous diet.

11 P. M. Worse;† countenance anxious; voice weak and lan-

* Examined with a lens, appeared like fibrine, mixed with fatty particles.

† Discharges have all the appearance of the rice-water evacuations of Asiatic cholera.

guid; pulse 104; abdomen tympanitic, and great prostration. Treatment: Fomentations of wine to abdomen, twenty drops laudanum of Sydenham, every hour, in a decoction Lichen Islandicus, until appearances indicated the contrary.

16*th*. Evidently better; treatment now limited to emollient injections, containing ten drops of laudanum, to be administered after every alvine discharge. The diarrhœa was thus completely checked; then patient was given sulph. quinia as a tonic, and so far convalesced as to walk and ride about. About a month afterward, he went to a neighboring city, where he became sick of fever, as he said; a great number of boils appeared on every part of his body, which discharged dead cellular tissue before healing. In June, 1850, he was in good health.

For the above case, I am indebted to Dr. Henry W. Kennedy, who has resided for many years in Buenos Ayres, a correspondent of the Academy of Natural Science, of Philadelphia, and well known in this city.

In the *London Philosophical Transactions* for 1810, Vol. C., a case is related by Sir Everard Home, of a man who died from the bite of a rattlesnake. In the same paper, a case is narrated of a Sepoy, sixty years of age, bitten by a cobra di capello in the back of the hand. This person recovered. He took brandy in doses of ℥iv every hour, with a drachm of eau de luce* occasionally. The brandy was afterwards reduced to ℥ij every hour. The subsequent treatment consisted of James's powder at night, and Peruvian bark in port-wine.

In the *Proceedings of the Academy of Natural Sciences*, Vol. IV. p. 38, two cases of recovery are reported by Dr. Savage, of persons bitten by the most venomous of the reptiles of Western Africa. The native treatment of the bite of this and of all other serpents, he observes, is to *suck out the poison*, make a free incision over the wound, and apply the juice of an unknown plant; sometimes a strong decoction of the same. Recovery is sometimes said to occur, but very rarely, however. A direct deep flesh wound is supposed always to prove fatal. The symptoms are

* The eau de luce is considered a specific in India; it is composed of liquor ammoniæ and ol. succinatum.

severe pain in the parts, rigors more or less palpable, sensation of heat, vomiting, profuse perspiration, and purging. If not much reduction of vital energy attend, there is a possibility of recovery; but if, on the contrary, an early sickness comes on, there can be no hope; death soon follows. The treatment in these successful cases consisted in the free internal administration of stimulants and narcotics. In one case, large doses of rum and sulph. of morphine were given, and a free incision made over the wound. The whole limb, up to the groin, was enormously swollen, and a bad sore followed the incision. He recovered at the end of three weeks.

Case II.—My friend Dr. Woodhouse, who was attached to the expedition of Capt. Sitgreaves, for the exploration of the rivers Zuñi and Colorado of the west, was bitten, on the 17th of September, 1851, by a species of rattlesnake, very abundant in California and Texas, which I have called Crotalus Lecontei, after my friend Dr. Leconte, who, so far as I know, was the first naturalist who observed it. He had struck the animal with his ramrod, and supposed him to be dead; but, on taking him up, he was instantly bitten on the outer edge of the index finger of the left hand, near the middle of the first phalanx. The pain was very intense, the whole nervous system experiencing a very severe shock. The doctor was, at this time, two miles from Zuñi. He at once sucked the wound, and a ligature was applied by Lieut. Parke, who was with him, to the finger, around the third phalanx. He also scarified it freely with a penknife, and sent a man, who accompanied them, to the camp for some strong liq. ammoniæ, which was applied to the wound immediately on receiving it, about twenty minutes after the bite (after walking a mile and a half). The man brought also with him a bottle of whiskey, of which the doctor drank freely. By the time he arrived at camp, the glands of the axilla had become painful and swollen; a faint red line was observed following the course of the lymphatics, extending from the wound along the dorsum of the hand, and inner and superior aspect of the forearm at the elbow, running up the inner side of the arm to the axilla. The finger was again scarified and held in warm water and allowed to bleed. Immediately on arriving in camp, the doctor began to drink brandy copiously, and took ammonia internally, about five drops

at a dose, keeping the finger in a cup containing liq. ammoniæ. This treatment was continued until intoxication ensued. It took one quart of fourth-proof brandy, besides the whiskey already taken (about half a pint), to produce this effect. The intoxication lasted about four hours, with occasional vomitings. About dark, of the same day, he took a purge of colocynth and blue mass āā grs. v, and was very restless. At 8 o'clock he took a dose of pulv. Doveri, and afterward, in the night, four grains of opium, in doses of a grain each. The pain was intense throughout the night, and the arm much swollen (a large flaxseed poultice had been applied early in the evening); the restlessness was great, the patient tossing about the whole night; the line of inflammation, on the following morning, was very broad and distinct, and the glands of the axilla were much swollen; the arm and hand were also swollen. On the third day the line of inflammation was about an inch and a half broad, filled with yellow serum, resembling the vesication produced by emplast. cantharid. The purge operated freely the next morning, after taking a Seidlitz powder. The diet consisted exclusively of gruel. On the following night, at bedtime, he took again ten grains of Dover's powder, and had some sleep. The second day, the hand and arm were painted all over with tincture of iodine. On the third day, the swelling increased and was enormous; pain intense; during three days he was unable to walk across the room without sickness of stomach, and was therefore obliged to keep the recumbent position constantly.

The above statement was communicated to me, orally, by Dr. Woodhouse. The following I copy from his notes:—

Saturday, Sept. 20. Passed a tolerable night; but my back is getting very sore, as the blankets on the stone floor make rather a hard bed. This morning the pain is very great, and the swelling extends down my left side to the hip. Renewed the tinct. iodin. I removed the skin from my finger, and it discharged freely a watery sanguineous fluid, without smell; the nail is becoming loose. This evening, at bedtime, took mass. ex. hydrarg. grs. v, with pulv. Doveri, grs. x. Continue potass. iodid. Diet the same.

21*st.* Passed a restless night, being much troubled with colic. Took magnes. calcinat. and spts. menth. pip. Bowels not being opened, took a Seidlitz powder, and was relieved.

22*d*. Passed a comfortable night, the swelling having left my side and arm; there is but little in the hand. Continue potass. iodid. I can now walk a few yards without nausea. Have been sitting up the greater part of the day. Diet, mutton broth and farina.

23*d*. I awoke this morning, feeling much improved, the swelling and pain being gone, except in the finger, the second joint of which does not present a healthy appearance, the palmar surface having much the appearance of gangrene, but the discharge is thin and watery, and I can detect no smell. The granulations do not present a healthy appearance; they are rough, and many of them look as if they were sprinkled with yellow ochre; the nail is quite loose. Continue potass. iodid. Diet, mutton broth, with a little of the meat.

24*th*. This day we commenced our march, and, after travelling six miles, encamped. I had placed my hand in a sling, and, on mounting my mule, found myself rather weak, and the mule hard to manage with but one hand. The sun was very hot; the heat, with the jolting of the mule, caused me to suffer considerable pain. I removed the nail, and from this time the finger gradually improved. The poultice was daily renewed until the last of October, when I applied simple cerate. In the mean time a large slough had formed, which gradually came away, the granulations requiring occasionally the application of the nitrate of silver. I continued to carry my hand in a sling until about the middle of November; a new nail commenced growing, but a sinus remained at the end of the finger; upon the introduction of a probe, the bone could be felt quite rough; a discharge from the sinus continued until about the 7th of February, when I removed the exfoliation of the end of the phalanx, showing evidently that the fang had penetrated the periosteum. Soon after this, the sinus closed, the finger remaining deformed, anchylosis having taken place in the first joint. The circulation is very imperfect, one of the arteries being destroyed, which renders the finger very susceptible to cold. The insertion of the flexor muscle is also destroyed.

Another case was mentioned to me, of a teamster under command of Capt. French, in the Quartermaster's department, who was bitten in the leg by a rattlesnake. Cups were applied to the wound, and he took two quarts of whiskey to produce intoxication. He was

well and driving his team in three days. Throughout the West, stimulants in the shape of brandy and whiskey are the remedies most relied upon. The western people say that unless intoxication be brought about the patient is sure to die. Dr. Heermann, who has recently spent three years in California, in natural history pursuits, informs me that among the trappers whiskey is the remedy par excellence. They also use a decoction of the rattlesnake-root, which is taken internally and applied to the wound.

In the *London Times* for November 1, 1852, a case is narrated at length of one of the keepers of the Zoological Gardens, Regent's Park, who was bitten by an Indian cobra. This person died in about an hour and a half after the bite. No other means were used than artificial respiration and galvanism. A galvanic current, passed from the back of the neck to the abdomen, was productive of no visible benefit. At the autopsy, the only lesions of importance noticed were a softening greater than usual at the lower part of the spinal cord, and excessive engorgement of the posterior parts of the lungs, "being almost black on section, and exuding copiously a blackish fluid, mixed with some air. The air-tubes, large and small, throughout both lungs, were filled with a black frothy fluid, and the lining membrane was generally stained of a very dark blackish color. The liver was of a darker color than natural, and the spleen enormously congested."

Several fatal cases of bites from rattlesnakes have occurred in New York and Philadelphia. As it is of the utmost importance that the remedies in accidents of this nature should be both prompt and efficient, there being no time to lose, I have thought the publication of the above cases might be useful.*

* Maderia wine is the internal remedy most commonly used on such occasions (bites of venomous serpents) by the Europeans in the Carnatic, and numerous instances are produced of persons not dying who had recourse to it.—*Russel's Indian Serpents*, p. 80.

"The first *precaution to use*, when one has been bitten by a venomous serpent, is to clean the bitten part, in order to prevent the poison adhering to the skin from entering the scarifications, which it is judicious to make immediately; we may either employ caustic or the cautery to destroy the flesh in that part. After having again washed the wound, let it be pressed, and strive to prevent the absorption of the poison by sucking the part, or what is preferable, employing the cupping-glass. A ligature over the wound itself, and another tied above the wound, if its form will permit, to prevent the com-

Dr. PEPPER presented the following

HISTORY OF A FATAL CASE OF GALL-STONE, DRAWN UP BY DR. THOMAS H. YARDLEY.

Mrs. A., aged fifty years, had enjoyed unusual good health through life, though inheriting a strong predisposition to gout.

In October, 1851, she had a slight attack of hepatic colic, and was jaundiced for a considerable time. Since then she has repeatedly complained of pain in her right side and back, but this was thought to be of a gouty character and not to require medical aid.

On the evening of the 4th of November, 1852, feeling indisposed, or bilious as she termed it, she took, without medical advice, a blue-pill and the next morning a bottle of citrate of magnesia. These acted freely and removed her indisposition.

On the 8th, four days afterwards, she was taken with a sharp pain in the right side soon after breakfast; but as she had, contrary to her usual custom, partaken of sausage, she attributed the pain to indigestion. The pain and uneasiness continued to annoy her through the day, but were not so severe as to prevent her from riding two miles to see a sick relative. In the evening the pain became more severe, and she had an attack of bilious vomiting, for which she took some essence of ginger and applied a mustard plaster.

On the morning of the 9th, when Dr. Yardley first saw her, she was in the dining-room, and seemed very cheerful. She said she did not think there was much the matter with her. Her chief complaint was soreness from the mustard plaster; though she had also an uncomfortable sensation in her right side, which was increased by motion. Her pulse, tongue, and skin were perfectly natural, and her bowels had been moved as usual the previous day. Presuming that the pain and vomiting of the preceding evening had been caused by

munication of the poison to other parts of the system, has been acknowledged to be of essential service provided they be not too tightly drawn."

Sudorifics have been stated to have good effects. M. Lenz has successfully employed chlorine, and recommended both its internal and external use; one may take daily without inconvenience an ounce or more of this chemical preparation. Frictions made with good olive oil have been recognized as efficacious in several instances.—Schlegel, *On the Physiognomy of Serpents*, vol. i. *Traill's Translation*, Edinburgh, 1843, p. 52.

the passage of biliary calculi, and that the soreness in her side was the necessary effect, he did not think any active treatment indicated. Mass. hydrarg. gr. j, opii gr. one-fourth were directed to be taken every two hours, with chicken-water for diet, the patient to be kept moderately quiet.

10*th*, 10 A.M. Dr. Y. again found his patient in her dining-room, but evidently more indisposed. She said she had taken but four of the pills, as she had felt perfectly well during the afternoon and evening, but had had severe pain and vomiting in the night, which she attributed to unusual exertion and excitement in the evening. She had taken during the night, in divided doses, sixty drops of elixir of opium.

She was advised to retire to her chamber and to keep quiet; to take a bottle of citrate of magnesia, and to have beef-tea for diet, as she was tired of the chicken-water.

5 P.M. The citrate of magnesia was taken in three doses, at intervals of two hours, and retained till an hour after the last dose; it was then thrown up with a large quantity of bile.

As the patient, with the exception of slight pains like those which precede the operation of purgative medicine, was very comfortable, she was left with the expectation that her bowels would soon be evacuated.

11*th*, 9 A.M. The patient passed a comfortable night, after taking twenty drops of elixir of opium. Bowels not opened; no vomiting till this morning after taking a cup of tea. Tongue slightly furred; pulse and urine natural; skin slightly yellow, but the conjunctiva not jaundiced. She says she has no nausea, but the attacks of vomiting are attended by a sense of fulness with burning in the throat, which passes off after the stomach is emptied.

Directed calomel ppt. gr. one-sixth; pulv. g. Arab. gr. one-half, to be placed dry on her tongue every half hour. As little drink or nourishment as possible to be taken.

5 P.M. Has passed a comfortable day; has taken twelve powders; no evacuation from the bowels, and no vomiting. Directed the powders to be discontinued, and if they did not operate by bedtime, an injection of soap-suds to be given.

12*th*, 9 A.M. At 7 o'clock last evening, soon after taking a cup of tea, she again vomited. As she then felt comfortable, and

thought the medicine would soon operate, she omitted the enema, and had a comfortable night without an anodyne.

Her tongue was more coated, and she had considerable thirst, but there was no other change in her symptoms.

The abdomen of the patient was carefully examined, but no cause for the obstruction could be detected; there was not the slightest tenderness on pressure. It is proper to remark that she was exceedingly fat. Directed ext. col. comp. gr. ij; pulv. aloes gr. ss; ext. conii gr. one-sixth, in pills, to be taken every hour, with cold limewater and milk for nourishment, and pieces of ice to relieve the burning in her throat.

4 P. M. Has taken seven pills; is tolerably comfortable, has had no discharge from the bowels and no vomiting, though she complains of the burning in the throat which always precedes it. Directed the pills to be taken every two hours.

9 P.M. Has taken nine pills; has just thrown up a large quantity of very thick bile, but nothing like stercoraceous matter could be detected in it. Is very thirsty, and restless, and uncomfortable, but free from pain except occasional twinges like those preceding the operation of medicine. Directed a large enema of soap-suds, and a teaspoonful of Hoffmann's anodyne by the mouth if restless.

14*th*, 9 A. M. Has passed a very uncomfortable night; expresses great anxiety about the constipation of her bowels, the injection having produced no evacuation. Has vomited twice, the last time at 3 o'clock; is excessively thirsty, but the skin is cool and the pulse and urine natural. She proposed taking another bottle of citrate of magnesia; and an injection composed of ol. terebinth. ℥ss, ol. ricini ℥ij, mixed with yelk of an egg and a pint of warm water was directed.

12 M. The bottle of citrate of magnesia, taken in divided doses, has remained on the stomach. The injection was retained twenty minutes, and then brought away some solid feces. Directed as large a quantity as possible of warm soap-suds to be thrown carefully into the bowels with a force-pump every two hours. A consultation was also proposed; at this the family seemed astonished, as they had not considered the patient seriously ill.

4 P. M. Dr. Pepper saw the patient in consultation. She had vomited at 3 o'clock. What was thrown up was carefully examined, but nothing but bile and the fluids she had taken could be detected.

She has had two injections of more than a quart each, but they were returned without any effect. Dr. Pepper carefully examined the abdomen, but could detect no cause for the obstruction, and no tenderness, except at a small spot near the middle of the belly, a little to the right of the linea alba. Directed epispast. 8 × 8 to be applied over the epigastrium; calomel ppt. gr. ij; opium gr. ss, to be taken every two hours; to have wine whey for nourishment, and at half past eight to have an injection of pulv. Jalap. ℈ij, mixed in a pint of warm water.

9 P. M. Complains of fulness and burning in the throat, but has not vomited; has taken three pills, and says the wine whey is very grateful to her. The injection was retained twenty minutes, but produced no effect. Directed the pills and wine whey to be continued if awake; the cuticle from a part of the blistered surface removed, and acet. morph. gr. ss applied; to be followed by another half grain in four hours if the patient vomited, or was restless and in pain.

Before Dr. Y. left the patient, she vomited, and was then quite comfortable. He requested that he might be called in the night if any change occurred in her symptoms.

15*th*, 9 A. M. Has passed a very comfortable night. At 10 the first half grain of morphia was applied, and she slept till 2; then being somewhat restless, the second half grain was applied. Has taken three of the pills, and a considerable quantity of wine whey without vomiting. For the last half hour, she has been covered with a profuse perspiration.

On entering the room, she told her physicians that she had passed a delightful night; was now perfectly comfortable, but very sleepy, and that they must not think it impolite if she went to sleep while they were talking to her. They found her pulse exceedingly feeble, and her fingers and hands blue and cold. Directed a tablespoonful of strong brandy punch every half hour, and the extremities to be rubbed with essence of ginger, and wrapped in warm flannel.

12 M. Patient sinking; directed the treatment continued, with the addition of essence of beef, and an injection of a wineglass full of brandy mixed with two eggs, and a wineglass full of cream.

She continued to swallow the brandy punch and essence of beef every ten minutes till 4 P. M., when she lost the power of deglutition, and at 5 she expired.

Forty-seven hours after death, the cavity of the abdomen was examined by Dr. Hewson, in the presence of Drs. Pepper and Yardley.

The obstruction in the bowels was found to arise from a large gall-stone (as large as an English walnut). This was lodged in the small intestine, about four feet from the cæcum. The intestines below were much contracted, and much distended, and congested above, though there was no evidence of inflammation.

On examining the gall-bladder it was found to be in a sphacelated condition, and united to the duodenum by soft and recent adhesions; on its under surface it communicated directly with the intestine by a large and irregular opening, through which the gall-stone must have passed. Several small stones were also found impacted in the neck of the gall-bladder, and this was the only part of the organ that retained its normal condition.

The gangrene was most probably the immediate cause of death; and it is not unlikely that the obstruction of the bowels would have been removed had the patient survived a short time longer, since the gall-stone had already passed through some twenty feet of the small intestine, and when once in the colon would have been voided without further difficulty.

Dr. BELL read, from a Dublin Journal, a list of surgical Instruments found amid the ruins of Pompeii, Herculaneum, and other ancient cities.

The Secretary announced the death of Dr. DANIEL DRAKE, of Cincinnati, Ohio, one of the Associates of the College, when on motion of Dr. Bell, it was

Resolved, That Dr. Charles D. Meigs be requested to prepare, and read before the College, a biographical memoir of the deceased.

A proposition (41) for Fellowship was presented.

Stated Meeting, January 5, 1853.

Dr. WOOD, President, in the chair.

Present, thirty-four members.

Dr. J. M. ALLEN was duly admitted a Fellow.

Dr. CASPAR WISTAR presented his resignation as a Fellow of the College, which was accepted.

The following report was received from the Trustees of the Building Fund.

The Trustees of the Building Fund beg leave to report to the College their proceedings for the past year, with the present state of the fund in their charge :—

In their report for January, 1852, it was stated that there remained uninvested, in the hands of their Treasurer, the sum of *ninety-five dollars and seventy cents* ($95 70). Since that date, they have received, through the Treasurer of the College, contributions from individuals towards the Building Fund, amounting to *fifteen hundred and thirty dollars* ($1530); interest and dividends on their investments, amounting to *four hundred and forty-seven dollars and ninety-four cents* ($447 94); and the sum of *three hundred dollars* (300) appropriated by the College; making together the sum of *two thousand three hundred and seventy-three dollars and sixty-four cents* (2373 64).

With the cash received they have purchased the following securities, viz. :—

Of the District of Penn, six per cent. loan	$900,	costing	$722	25
" " " "	100,	"	85	50
" City five per cent. gas "	100,	"	92	50
" " " loan	100,	"	92	50
" " " "	600,	"	585	00
			1577	75

Their account, therefore, will stand as follows:—

Amount on hand in January last	$95 70
Whole receipts in cash during the year 1852 . . .	2277 94
Making	2373 64
Amount of investments	1577 75
In the hands of the Treasurer of the Trust . . .	795 89

The Trustees will seek the earliest opportunity for the favorable investment of this sum.

Besides the sums in cash above stated, they have also received

Four shares of the *Stock of the Pennsylvania Railroad Company*, as a contribution to the Fund; and

Four shares of the *Stock of the Lehigh Coal and Navigation Company*, appropriated by the College.

The whole of the securities now belonging to the Fund, including the additions made during the last year, with their par value, are as follows:—

Schuylkill Nav. Co.'s convertible mortgage loan . .	$577 50
Schuylkill Nav. Co.'s preferred stock, eight shares . .	400 00
Schuylkill Nav. Co.'s common stock	51 00
Chesapeake and Delaware Canal Co.'s loan . . .	545 16
Lehigh Coal and Nav. Co.'s Stock, four shares . .	200 00
Pennsylvania Railroad Co.'s stock, four shares . .	200 00
City six per cent. loan	1500 00
City six per cent. gas loan	1100 00
City five per cent. loan	3600 00
City five per cent. gas loan	100 00
Spring Garden six per cent. loan	1300 00
District of Penn six per cent. loan	1000 00
	10,573 66

The estimated value of these securities, at the present market prices, is about *ten thousand two hundred and forty dollars* ($10,240); and if to this be added the cash in the hands of the Treasurer ($795 89), and the interest on the investments now due, amounting to two hundred and sixty dollars ($260), it will be seen that the present value of the Fund exceeds *eleven thousand two hundred and ninety-five dollars* ($11,295). At this time last year, the value of the Fund was estimated to be only about $7500, including the investments and the money in the hands of the Treasurer; so that, in the short space of one year, in consequence of

additions made to the Fund, and the rise in the value of the securities in which it is invested, it has increased by the very considerable sum of $3,795.

The Trustees cannot but congratulate the Fellows of the College on the very favorable condition of the Fund, and on the hope which it holds out of the attainment, at no distant date, of the object for which it was established.

(Signed,) GEO. B. WOOD,
GEO. FOX,
JNO. RODMAN PAUL, } *Trustees.*

Philadelphia, January 3, 1853.

Dr. SAMUEL JACKSON related the following

ACCOUNT OF TWO CASES OF BITES FROM VENOMOUS SERPENTS.

The following two cases of snake-bites may possibly be worthy of notice, as an appendix to Dr. Hallowell's communication on this subject, at the last meeting of the College.

CASE I.—I was called into the country, the first summer I lived in Northumberland, to Tho. Glydewell, bitten by a rattlesnake. I went out in despair and distress, as to a disease for which I was unprepared. I had heard and read more on the subject perhaps than most young physicians, my preceptor having talked and lectured much thereon; but I had learned nothing conclusive as to a successful treatment.

The young man had been bitten on the first phalanx of the thumb about twenty-four hours before, certainly by a young rattlesnake, for they had killed the animal and brought it home. Various applications, domestic and Indian, had been made to the wound, but what they were I do not recollect; nor can I remember what medicines he had taken.

The first thing that struck me was a most sorrowful, distressed, despairing countenance, very similar to that of the only case of yellow fever I had ever seen: his skin showed that peculiar discoloration particularly striking in typhus fever: his hand and arm were enormously swelled, and that side of his body from the hip to the neck, was much swelled also: his skin was hot, with some sweat on his forehead: his pulse was so large and powerful as to

strike me forcibly, and to make a lasting impression on my mind. Its other properties not recollected.

I bled him while sitting up in bed fairly to fainting, and when he recovered from this, he broke out into a profuse perspiration; this we maintained by laudanum with aromatic spirits of ammonia and diluting drinks. The arm was fomented with flannels wrung out of hot vinegar. I would have preferred cold applications, but I feared the suppression of the perspiration. I remained with him for some hours, until I found his pulse and countenance becoming more natural; and then ordered that his perspiration should be maintained—that, if it ceased, they should give him a large dose of calomel followed by castor-oil.

I was prevented from seeing him again that night, but the next morning he was evidently convalescent. The perspiration had continued, the swelling of the arm was greatly diminished, the countenance entirely changed for the better. The blood, which had been drawn off rapidly into several small bowls, was found totally dissolved in every bowl. This fact accounted perhaps for the great difficulty I had found in the closing of the vein, which was finally accomplished by the conical compress.

Whether I fell on the proper method of treating this disease, is, of course, uncertain; but I think it is very clear that, without medical aid, the patient must have died. Nature could hardly have thrown off this severe disease, incumbered by all the blood and perspiration of which she was relieved. Certain it is that his convalescence appeared to begin as soon as he recovered from his fainting and the perspiration had begun to flow. The ammoniacal medicine was given, not merely on account of its admirable sudorific properties in conjunction with laudanum, but because much had been written on the mysterious properties of ammonia as an antidote.

In the case related by Sir Everard Home, in the *Philos. Trans.* for 1810, and copied into the *Eclect. Repert.*, Vol. I., the patient lived eighteen days in various and severe distress, finally perishing of an abscess near the bitten part, and of gangrene in the axilla. Now, such severe local disease as occurred in my patient, attended by such furious general excitement, could hardly have subsided under the expectant method; we may rather infer that gangrene or abscess would have formed, of which the patient must have died.

The excitement in Sir Everard's case was below par, and would not have borne depletion; but as the patient lived eighteen days, it appears to me that the deobstructing effects of mercury and blisters might have been tried in conjunction with a supporting treatment. Sir Everard Home's case was attended by a feeble reaction of the arterial system, but even this tends to local congestion and inflammation. In mild scarlatina, the patient appears to be going on well, the whole disease appearing to be safely lodged in the skin; while, at this very time, there is a secret determination to the ears, producing suppuration and perhaps a lasting paracusis; or to the glands of the neck, making scrofuloid tumors; or to the dropsy-making organs, forming anarsarca, ascites, or hydrothorax. All these evils may generally be prevented by calomel purges and tartar emetic in febrifuge doses. But, mark well—I am speaking of mild cases of open reaction: yet even in highly inflammatory cases, that will bear free depletion by bleeding, calomel, and tartar emetic, these local determinations may be prevented as certainly as in the mild cases. Of those that will bear no depletion, I am not speaking.

Case II.—In the year 1821, I was called to Eliza Logan, who had been bitten by a copperhead over the tendo-Achillis, about an hour before. The foot and leg were much swelled, as high as a bandage they had applied below the knee. As my teeth and mouth were sound, I sucked the wound for a long time, and then desired the husband to take my place; but he soon sickened and desisted. The cord was removed, the foot and leg covered with a poultice of plantain leaves as a placebo, the doctor not knowing what was best to be done. The general treatment I do not certainly recollect.

The next day, about eighteen hours after the bite, she had a high fever, and the whole limb, as high as the hip, was much swelled. She was then bled and purged, after which the disease gradually subsided without any further treatment. The child took the breast through the whole time without any apparent injury. In this case the fever was mild; there was nothing of the peculiar countenance of case first, nor was the blood dissolved. If this case has anything of interest, it is, that the child was not the least affected by the mother's milk.

YEAST IN DIABETES.

Dr. Wood remarked that, since the last meeting of the College, there has been no further improvement in the case of diabetes, the history of which was then presented by him. The employment of the yeast has been persevered in, except for a short period during which rennet was substituted without any appreciable effect; but there has been rather a falling back than continued diminution of the symptoms. The patient is better, however, than when first subjected to treatment. The quantity of urine is diminished one-half, and its specific gravity is considerably less.

Dr. Pepper has employed the yeast in a case of diabetes; the effect appeared at first to be strikingly beneficial, but this did not continue for any length of time. Dr. P. has used rennet steeped first in tepid water, and subsequently, with the view to increase its strength, in wine, but has not observed any good effects to result from its employment. He suggested that a trial should be made of pepsin as a remedy in diabetes.

Dr. P. inquired whether either of the Fellows present could, from his own personal knowledge, cite a case of saccharine diabetes in which a cure had been effected.

Dr. C. D. Meigs had some time ago under his care a young man laboring under diabetes; at his suggestion, the patient consented to live exclusively upon azotized food, and in consequence recovered to all appearance from the diabetes, and regained a perfect state of health; but subsequently, he abandoned himself to a dissipated and irregular course of life, and died of disease of the heart.

A few days ago he saw a lady, about 29 years of age, who was affected with an excessive discharge of urine; he put her under the use of yeast, a teaspoonful three times a day, but it acted on the bowels so severely—producing excessive diarrhœa—that she was under the necessity of discontinuing it.

Dr. Coates has seen a number of cases of diabetes mellitis, but knows of no instance which terminated favorably.

Dr. Jackson had the good fortune to effect a cure in a case of genuine diabetes. The history of it is recorded in the *Ameri-*

can Journ. of the Med. Sci. Vol. III. p. 487. The patient, a robust and healthy man, after suffering from intermittent fever, became affected with diabetes—his urine was profuse in quantity and as sweet to the taste as honey and water. The treatment consisted in the administration of remedies to determine to the surface, with bark and iron, to support the strength.

On referring to the record of the case, we find that the patient was "directed to take Dover's powder every evening as freely as the stomach would bear it, and at the same time to put his feet into a tub of hot water under the bedclothes, while he lay extended on his back and well covered. He was directed to live almost wholly on animal food and entirely without vegetables; to drink as little as possible, and, in fine, to avoid everything that could impose labor on the kidneys.

"The simultaneous use of the powder and the bath had the desired effect, producing a free and comfortable perspiration, not one feeling of which he had known for many months, and in a few days the skin felt more natural, the urine began to diminish, and the patient felt that he was certainly better. The previous prescription was continued, and we directed a tonic mixture of bark, ginger, and iron." The cure, it appears, was completed in about two months. The patient was merely visited by Dr. Jackson in consultation with Dr. Price, of Sunbury.

Dr. MAYBURRY stated that some years ago a patient was sent to the city laboring under unquestionable diabetes. He was placed under the care of Dr. M. The patient was very much emaciated, feeble, and anemic. The urine when tested was found to be decidedly saccharine. He was confined to an exclusively animal diet, tonics, principally preparations of iron (the muriated tincture) in large doses, sulphate of quinine, the subnitrate of bismuth, etc. This treatment was continued for nearly six months, when the patient was entirely cured, and is *now* enjoying good health.

ENLARGEMENT OF THE UTERUS.

Dr. C. D. MEIGS was desirous of calling the attention of the Fellows to certain affections of the uterus in which an erroneous diagnosis is liable to be made—simple, curable enlargements being

mistaken for cases of hypertrophy with change of structure. The uterus, he would premise, is an organ peculiar in respect to this circumstance, that it is naturally designed to undergo considerable and repeated changes in its condition; acquiring a physiological hypertrophization from which, upon the cause inducing this change being withdrawn, it returns rapidly to its normal size. The uterus of the non-gravid female measures about two and a half inches in length, about one and three-quarters in breadth across the *body*, and three-quarters of an inch in thickness; weighing about two ounces. When conception takes place, the uterus sets off on a course of rapid hypertrophic development, becoming, at the end of two hundred and eighty days, twelve inches in length, from seven to eight inches in width, and from one and a half to two pounds in weight. After having acquired this size, no sooner is parturition completed, and it is thus emptied of its contents, than it hurries back to its non-gravid condition; the excess of material producing its augmented size being removed by absorption. This is usually effected in from twenty to twenty-eight days. This physiological hypertrophization of the uterus and its subsequent return to its normal non-gravid size may take place in the same individual sixteen, eighteen, or even twenty times.

Now this peculiar physiological law of the uterus renders it especially prone, when subjected to irritation, to undergo a *pathological* hypertrophization; and this condition the physician will be enabled to remove if he can but detect and cure the irritating cause. The hypertrophization may result from retroversion of the uterus, from irritation or ulceration of the cervix, from a rheumatic disease of the organ, or from polypus within its cavity; either of which affections being removed, the enlarged uterus may be expected to return more or less quickly to its normal size. These forms of enlargement of the uterus are not unfrequently mistaken for hypertrophy of the organ accompanied with serious alterations of its structure. Are there any means by which the cases of simple pathological hypertrophy may be distinguished from these latter degenerations? Dr. Meigs remarked, it will almost invariably be found that simple hypertrophy is unattended with any change in the general form of the uterus, whereas in cases of uterine enlargement attended with change of structure, the form of the uterus is always more or less distorted;

the distortion being various according as the change of structure and accompanying hypertrophization is chiefly in the cellular tissue, the bloodvessels, the absorbents or the nervous matter of the uterus. Hence, to arrive at a correct diagnosis in cases of enlarged uterus, it is only necessary to ascertain whether the organ preserves its form or not. Dr. M. had been occasionally deceived, he admitted, but very generally he has succeeded, by the test referred to, in arriving at a correct diagnosis. If it is ascertained that the cause of the hypertrophization is under the control of art, then the prognosis is favorable, for if the cause upon which the hypertrophy depends be removed, the uterus will hasten back from its state of hypertrophy to its normal size, as after parturition.

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ISAAC PARRISH, M.D.

Isaac Parrish

Published by Parrish Brothers

SUMMARY

OF THE

TRANSACTIONS OF THE

COLLEGE OF PHYSICIANS,

OF PHILADELPHIA.

FROM FEBRUARY 2, 1853, TO APRIL 6, 1853, INCLUSIVE.

Stated Meeting, February 2, 1853.

Dr. Wood, President, in the chair.

Present, thirty-eight members.

Drs. Adinell Hewson and James E. Rhoads were duly admitted Fellows.

The following additions to the Library were announced:—

Prize Essay: On Variation of Pitch in Percussion and Auscultation, by Austin Flint, M. D., of Buffalo, N. Y.—From the Author.

Transactions of the American Medical Association, Vol. V., from the Committee of Publication.

The Committee of Publication reported that they had issued the 9th No., Vol. I., New Series, of the *Summary of Transactions*.

The following Fellows were elected Delegates to the American Medical Association:—

Isaac Hays,
W. S. W. Ruschenberger,
Charles Evans,
Edward Hallowell,
Rene La Roche,
George Fox,
G. Emerson,
William Ashmead,
Alfred Stillé,
Edward Hartshorne,
Henry Bond,
J. Rodman Paul,
John Bell,
Joseph Carson,
Robert Bridges.

Proposition (2) for Associateship was presented.

Dr. HAYS related the history of a somewhat curious case of

MALFORMATION OF THE CRYSTALLINE LENS.

About three months ago, he was consulted in the case of a young lady about sixteen years of age, laboring under a defect of vision, which had interfered materially with her education. With a double concave glass the patient could see with one eye tolerably well, but no letter could be distinguished with the other eye with any ordinary concave or convex lens. The general health of the young lady was good; and the appearance of the eyes indicated no cause for the imperfect vision under which she labored. Dr. Hays at first supposed it might result from some defect in the retina or optic nerve. But upon more closely examining the case, he ascertained that when the patient looked with the right eye at lines of the same length drawn upon paper and crossing each other at right angles, the perpendicular ones appeared to her to be invariably longer than the horizontal, that perfect circles appeared to her as ovals from an increase of the perpendicular and a diminution of the transverse diameter, and that all other figures were distorted in the same way. Dr. Hays then became convinced that the defect of vision resulted from a malformation of the crystalline lens, which represented a portion of a cylinder instead of a sphere, and accordingly he obtained a lens of a similar form, which being placed transversely has had the effect of counteracting the distortion of images resulting from the malformation of the crystalline lens. With spectacles, having such a lens for the right eye, and an ordinary double concave lens for the left one, the young lady is now able to read ordinary print with perfect ease, with either eye singly; and when using both, she sees still more distinctly.

Dr. WOOD related the following

CURE OF PERITONITIS WITH PROBABLE INTESTINAL PERFORATION.

Dr. WOOD wished to call the attention of the College to a case of peritonitis which had recently been treated, under his supervision, in the Pennsylvania Hospital. But before proceeding, he

would remind the Fellows that, on a previous occasion, he had offered them a brief notice of a case of the same disease, occurring suddenly during apparent convalescence from typhoid or enteric fever, and terminating favorably under the opiate treatment recommended by Drs. Stokes and Graves, of Dublin, together with a large blister. This notice may be seen in the *Summary of the Transactions of the College* for Nov. 5, 1850 (Vol. I., N. S., page 32). As is well known to many of the Fellows, the patient was a highly respectable young medical gentleman; and of the nature of the case there was little room to doubt. The one now to be noticed is of a less certain character, but will be found to present features which render it highly probable that the inflammation of the peritoneum resulted from perforation of the bowels. For the dates in the case, Dr. Wood was indebted to his young friend, Dr. Penrose, one of the resident physicians of the Hospital, who had the immediate charge of the patient.

At the commencement of my term of attendance in the hospital, observed Dr. Wood, the patient had been several days in the house, laboring under a slight fever, which had been preceded before his admission by a feeling of general uneasiness, weakness, and loss of appetite. There had been no epistaxis or diarrhœa. When I first saw him, his pulse was somewhat accelerated, his skin warmer than in health, the tongue lightly furred, and the abdomen moderately meteoric, with slight pain on pressure. The symptoms were those of a mild case of enteric fever at the close of the first or commencement of the second week; but there were no sudamina, no red spots on the abdomen or elsewhere, and no diarrhœa.

This condition continued, under a mild treatment, with little change for several days; when suddenly, on the ninth day after admission, perhaps near the end of the second week from the occurrence of the first morbid feelings, the patient was seized with symptoms of severe peritonitis. The contrast between his condition on the previous day, when he seemed to be laboring under only a moderate fever, and that which he now presented on the occasion of my visit, was very striking. The abdomen was at this time much swollen, tense, and exquisitely painful upon pressure; the patient complained constantly of severe pain in this region; the decubitus was on the back with the knees drawn up; the pulse

was small, thready, and extremely frequent; the skin hot; and the countenance shrunk and expressive of great anxiety. There could be no doubt of the existence of severe peritonitis; and the symptoms were found aggravated on the following day, when the tongue had become dry, and the abdomen still more distended.

Thinking that the case was one probably of perforation, Dr. W. directed the patient to be placed and maintained under the decided influence of morphia; a blister to be applied over the whole abdomen, to be followed by an emollient poultice, and one grain of the mercurial pill to be given every hour until the gums should be affected. The diet consisted of sago boiled with equal parts of milk and water, and the drink of ice-water, in small quantities. The object of the morphia was to keep the intestines as nearly immovable as possible, of the blue mass and the blister to obviate the inflammation, of the diet to support the strength already much enfeebled by the pre-existing fever. Bleeding in any shape was wholly out of the question.

This plan of treatment was steadily pursued. The amount of sulphate of morphia necessary to keep the patient in a constant state of semi-insensibility, short, however, of stupor, varied from three to five grains daily, given in divided doses, equivalent to at least from twelve to twenty grains of opium. One of its effects was to produce and sustain a steady and rather copious perspiration. The mouth became slightly affected in two or three days, after which the mercurial was gradually diminished. In three or four days some amendment was observable; and, in somewhat less than a week, the pulse had become fuller and slower, the countenance much less anxious, the abdomen softer, and the whole condition of the patient more favorable. The bowels, which had not been moved from the beginning of the peritoneal attack, were now opened spontaneously. The inflammation had obviously much subsided; but the tongue remained dry, the febrile symptoms continued, and it appeared to Dr. W. that, while the patient had escaped the greatest danger of the peritonitis, he was in no little hazard from the diseased glands of Peyer, supposing the case to be, as he supposed, one of enteric or typhoid fever.

Having from much experience great confidence in the oil of turpentine in this stage of enteric fever, and believing that, if there had been perforation, the opening was now closed by adhesions,

Dr. W. ventured upon this remedy in the dose of ten drops every two hours, given in the form of emulsion; the morphia and blue mass being continued. In two days after commencing with the oil of turpentine, the patient exhibited evidences of decided improvement; the tongue having become moist with a disposition to clean, the tympanites sensibly diminished, and all the symptoms ameliorated. The mercurial was now omitted; but the morphia and oil were continued, though in quantities gradually diminishing with the progress of amendment. From this time convalescence fairly began, and, in the course of five or six weeks, the patient was restored to tolerable health, though with occasional symptoms of constitutional and local disturbance, such as might be expected to follow an attack so severe, protracted, and exhausting. At the present time, somewhat more than three months from his original seizure, he is still in the hospital, with a good appetite, a clean tongue, a good pulse, and greatly increased weight, but suffering with occasional abdominal pains and distension, apparently arising from accumulation of flatus, retained by the impediment offered to the regular movement of the bowels by the organized adhesions which have probably taken place.

That the peritonitis, in this case, depended upon intestinal perforation cannot be positively determined; but the probabilities appeared to Dr. W. to be strongly in favor of that view; and, at all events, the case is therapeutically interesting, as showing the advantages of the opiate treatment, conjoined with mercurialization, under circumstances which did not permit a recourse to the lancet. Another point of considerable interest is, Dr. W. thought, presented in the apparently excellent effect of the oil of turpentine in obviating the symptoms of the typhoid or enteric fever, after the subsidence of the peritoneal inflammation.

Dr. LEVICK related the following

CASE OF STRANGULATION OF THE INTESTINE BY A DIVERTICULUM INTESTINI.

E. W., dentist, æt. 30, had been subject from infancy to attacks of colic, which were generally relieved by vomiting. For a long time before his illness he had been costive, his bowels being moved only by injections of cold water. During the last week of his life, he had been scarcely free at any time from griping pains.

He partook of a cold dinner on the 29th, four hours after which he was seized with vomiting, which continuing, Dr. Kite was sent for. He found him suffering great pain, and ejecting from his stomach everything taken into it.

Sinapisms and fomentations were applied to the epigastrium, and the patient was placed in a warm-bath, but without any appreciable benefit. Opiate injections were the only means employed that afforded any relief. To overcome the obstruction which was believed to exist, five quarts of tepid water were slowly and carefully injected into the bowel.

The vomiting continued with but slight intermission, and the patient died on the following morning at 8 o'clock.

The preceding history of the case was furnished by Dr. Kite, who with Dr. Remington had charge of the patient.

The examination was made by Dr. Levick, December 29, in the presence of Drs. Kite, Remington, and Davis, fifteen hours after death.

Exterior.—Rigidity complete; much lividity of the body; face discolored by an offensive dark-colored fluid which had escaped from the mouth; abdomen tympanitic; odor of decomposition very great.

The *abdomen* alone was closely examined. The small intestines were of a dark-purple hue, and full of gas.

The *cæcum* full of gas, lifted entirely out of the iliac fossæ, and having the appendix vermiformis lying loosely upon it. A little below and to the right side of the umbilicus, there was found a digital band firmly adherent by one extremity to the parietes of the abdomen. Upon examination, this was found to be a cæcal sac or diverticulum coming off from the ileum at a distance (when the intestine was stretched out) of about two feet from the ileo-cæcal valve, and of a size, at its connection with the intestine, sufficient to admit the little finger; having the same structure and investments as the intestine. This completely encircled the gut, having produced strangulation and gangrene.

The liver, spleen, and other viscera were healthy, though rapidly undergoing decomposition. A partial examination of the lungs and heart showed them to be in a similar condition.

There was, Dr. L. suspected, no doubt of the congenital adhe-

sion of the distal extremity of this diverticulum to the parietes of the abdomen.

The existence of such a cæcal pouch is alluded to by almost all anatomists as a frequent if not normal occurrence; thus in the *Dublin Dissector*, it is stated: "To the ileum near to its lower end, a small digital appendix or diverticulum is occasionally found attached, the embryonic remnant of the vitelline sac." It had never occurred to Dr. L. to find one, but he has been told that they are frequently seen in our dissecting-rooms.

Strangulation of the intestine from the appendix vermiformis has not unfrequently taken place, but a similar accident from a diverticulum intestini, is, probably, of very rare occurrence.

Dr. TYSON presented the following report of two cases of

PNEUMONIA TREATED BY TARTRATE OF ANTIMONY AND POTASSA.

Dr. Tyson desired to report to the College two cases of pneumonia, successfully treated by tartrate of antimony and potassa. They were presented as they occurred, somewhat amplified from his note-book.

CASE I.—Caroline Mary T., æt. 15, was attacked with a *double* pneumonia on the 30th of September, 1852, the consequence of an unavoidable exposure to a cold rain for several hours. Dr. T. saw her on the fifth day of the attack. She had then a high fever, flushed cheek, difficulty of respiration in the recumbent posture, a short sharp cough, without expectoration, and "a dull heavy pain," as described by herself, referable to both lungs. The chest, on percussion, was dull and flat over the right lung, and to some extent in the lower lobe of the left lung, and from the upper lobe of this latter alone could a satisfactory resonance be elicited. Auscultation could alone detect the vesicular murmur at this point, the other portion of the left, and the whole of the right lung, being marked by the solidification which had already taken place in their parenchymatous structure. The chest was immovable in its lower two-thirds, the intercostals in this space failing to respond to the short hurried movements of the diaphragm. In truth, the patient was breathing from the upper lobe of the left lung, and unless relief was promptly afforded, she must die; the second stage of the

disease or solidification of the right lung being complete, and the left beginning in its lower third to assume the same characteristic phenomena. As no time was to be lost, sixteen ounces of blood were at once abstracted, forty leeches ordered to the chest, and six grains of the mild chloride of mercury given, to be assisted in its action subsequently, by a solution of half an ounce of sulphate of magnesia, with thirty drops of the vinous tinct. colchici. After its operation, two grains of the first article named were ordered every third hour throughout the day, until twenty-four additional grains, making half a drachm in all, had been taken. To each dose of the latter was added the one-eighth of a grain of opium. This Dr. T. was induced to do, from the extreme restlessness and want of sleep of the patient, her friends informing him that she had not slept for the previous three days and nights, and also with a view of more speedily inducing the constitutional influence of the calomel, by restraining its purgative tendency on the chylopoietic viscera, and thus promoting its *aplastic* power. At the end of the fourth day, the calomel had begun to produce its peculiar effects, at the same time that the bowels had been several times freely emptied. The fever continued, with harsh dry cough and expectoration of blood in the occasional sputa, with an apparent increase in the pneumonic symptoms, judging from the rational and physical signs. Dyspnœa was greatly augmented by the decubitus, and no open sound was responsive to percussion in the lower lobe of the left lung, the auscultatory signs being of a negative character in this portion of that side, while the opposite side had undergone no improvement. The pneumonia had evidently increased, and Dr. T. feared it would involve the whole of the left lung, and that he should lose his patient; auscultation in the superior lobe of that side indicating tubal respiration and bronchial rhoncus.

In this condition of things, what was to be done? The patient's life was in extreme peril. The calomel and opium had been pushed as far as it was prudent to go, short of ptyalism, but the pneumonic symptoms had steadily advanced. The pulse was of sufficient force to warrant the further abstraction of blood, which it was resolved to accomplish by means of cups, thus gaining the double advantage of depletion and counter-irritation which this means affords. In conjunction with this, four grains of tartrate of

antimony and potassa dissolved in one ounce orange-flower water, was given in teaspoonful doses at intervals of two hours, so that the whole should be taken throughout the twenty-four. The first influence of the medicine was, to produce some nausea, with occasional vomiting, though not at all distressing in its effects, occasional diaphoresis, and slight reduction of arterial excitement. On the following day the amount of the salt was increased to two grains, and the quantity thus increased daily till it got up to ten grains; which number were taken in the twenty-four hours, with no other notable result than some slight gastric disturbance, occasional nausea, copious alvine dejections, and free expectoration, the pneumonia steadily declining. From this period the strength of the solution was reduced two grains each day, till but two were given in the twenty-four hours; but now, all the symptoms having so rapidly improved, its further employment was suspended; the expectoration from being profuse having nearly ceased, and all the other signs evincing a thorough resolution of the disease. What is remarkable, the patient's strength appeared to increase under the daily addition of the tartar emetic, whilst the reduction in force and frequency of the heart's action was most marked and satisfactory. She also rested well, had a daily evacuation, and expressed herself as feeling refreshed and better each morning. In fact, a favorable change was observable from the commencement of the tartar emetic treatment, and continued progressively till the disease was entirely overcome, and to this article, the other part of the treatment being merely subsidiary and wholly inefficient of itself to accomplish such a result, Dr. T. felt justified in attributing the cure, without which agency a fatal termination must have ensued.

She was under treatment, in all, seventeen days; with the tartar emetic eight days, having taken forty-six grains.

In the second case, the treatment was varied, by at once having recourse to the tartar emetic after venesection, and its result serves to illustrate, even more forcibly than the former, the influence exerted by this potent agent in the cure of pneumonia.

Case II.—Amelia M———, æt. 18, had been ill for several days before the pneumonic symptoms were developed, the consequence of a long ride through the sands of Jersey, in an open carriage,

on a cold wet day. Dr. T. was called in on the 1st of November, 1852, when her condition became alarming to her friends, and the characteristic symptoms of pneumonia were most marked. Being an only child, her father, who was the sole surviving parent, had been unwilling to admit her indisposition to be of a serious nature, and only sought advice when alarming and unmistakable evidences of disease were apparent. These were, short hurried breathing, with a cough almost croupal in its character, partial aphonia, considerable prostration, hot and pungent skin, with a quick and jerking pulse, a slight pleuritic stitch, and a dull heavy pain in the region of each pulmonary space. No sound was responsive to percussion over the right lung; it was perfectly flat throughout the whole structure. In the left, there were crepitant rales over the entire lung, which marked the respiratory murmur, the air as it passed into the bronchial tubes meeting with a sudden arrest in its course by a short clicking sound, and not at all permeating into the lower lobe of this side, which was flat on percussion.

The patient was at once bled in a full stream, from the arm, to about eighteen ounces, "as a means," in the language of Laennec, "of allaying for a time the violence of inflammatory action, and giving time for the tartar emetic to act," which was prescribed in a solution of four grains to the ounce, a teaspoonful to be taken every second hour. At the end of twenty-four hours, there was some abatement in the dyspnœa, and, with moisture of the skin, a less distressing feeling prevailed. The decubitus could now be borne without that *persistent* sense of impending suffocation which had rendered the earlier hours of the attack after Dr. T. saw her, a time of deep anxiety and solicitude to her friends. Nausea and vomiting had taken place at intervals, but the sputa had undergone little change, except in quality, being of that tough, tenacious, sanguinolent character, which is usually so marked a feature in this malady. After the second day, Dr. T. continued to increase the quantity of the salt two grains daily, till eight grains were tolerated in the twenty-four hours, with even less gastric disturbance and vomiting, than the first few doses caused when the solution was only half the present strength. By this time all the symptoms had undergone so decided an improvement, expectoration being fully and freely established, that it was deemed judicious to lessen the amount taken, which was done by a daily decrease of two

grains till but two were taken in the twenty-four hours, when it became unnecessary to continue its exhibition any longer, all the pulmonic symptoms having disappeared.

The catamenia, which was present at the invasion of the disease, ceased, but was restored a few days after its next anticipated recurrence, by the application of leeches to the vulva, followed by warm fomentations to the parts.

Some irritability of the heart's action seemed to call for the administration of digitalis, which in doses of ten drops of the tincture three times a day, along with a solution of bitartrate of potassa, for two or three days, effected a complete removal of this difficulty, and was all the treatment which present indications demanded, or the patient subsequently required.

She was under treatment fifteen days, having taken during the first seven days of that time, thirty-four grains of tartar emetic.

Both these persons continued well, and are at this time in the enjoyment of full health.

Dr. T. added, that in other instances of pneumonia, less grave in their character than the two narrated, he has almost invariably relied upon this salt, premising its employment by judicious depletion. In no case, even when given to very young persons in gradually augmented doses, has its administration resulted in any untoward consequences, or failed to meet his utmost expectations.

Dr. JACKSON [OF NORTHUMBERLAND] read the following:—

BIOGRAPHICAL NOTICE OF DR. ISAAC PARRISH.

To commemorate the virtues of a departed friend, which I now do by command of the College, is a task both pleasing and painful. In this mixed emotion of pleasure and pain, you will all sympathize with me on the present occasion: for the subject of this memoir was the meritorious friend and companion of us all; one whom we looked to for pleasure and instruction; whose welcome voice was often heard in this hall, and never without sincere respect; whose friendly and benevolent demeanor won more and more our esteem and love.

Dr. ISAAC PARRISH was distinguished and favored by the merits of his ancestors. His great-great-grandfather was John Parrish, a native of England and of Dutch extraction. He commanded a

merchant vessel trading to the Chesapeake, and was afterwards made surveyor-general of Maryland. He became possessed of considerable tracts of land, on a part of which some of his descendants now reside.

His great-grandfather, whose name was also John, died in possession of a landed estate on which a portion of the city of Baltimore is now built; but it was lost to his family by his generosity in the perilous friendship of indorsing.

Isaac Parrish, his grandfather, settled in Philadelphia, where he raised a numerous family, and retired from business in the decline of life with a respectable competence. He and his wife were eminent members of the society of Friends, and held important stations in the government of the Church. The following notice of this exemplary pair, I quote on account of its beauty as well as its propriety and authority, from the memoir of their son, Dr. Joseph Parrish, written by the President of this College.—"The reward of a virtuous life," says Dr. Wood, "has seldom been more happily exemplified than in the old age of this venerable couple. They lived sixty-six years together and died within a very short period of each other at a very advanced age. Their last years were cheered by the affectionate attentions of their few remaining children. They who enjoyed the familiar intimacy of Dr. Joseph Parrish, cannot but vividly remember his beautiful deportment towards his aged parents. The youngest of eleven children, he was their joy and consolation through life; in youth obedient, in manhood affectionate and attentive; when the weakness of old age came upon them, all that was tender and respectful; so that when he closed the eyes of his venerable father, he could say with sincerity, that he was not conscious of having ever offended him."

The father of our departed friend was Dr. Joseph Parrish, the affectionate and pious son, a part of whose eulogy we have just read; a man too well known to require further notice, his character being engraved in the hearts of us all. His mother was Susanna Cox, daughter of John Cox, near Burlington, New Jersey, a very respectable preacher in the society of Friends, long and extensively known as one of their leading members. Of her, it is only necessary to say, that she was in all respects worthy of such a husband. She was the mother of eleven children, nine of whom are living—

all enjoying very fully the comforts of life, and the good esteem of their neighbors, as also of a very extensive and numerous acquaintance.

Such, then, were the parents and the grand-parents of Isaac Parrish; and of this ancestry, all who knew him must acknowledge he was a worthy descendant; precisely such as they, in the ardor of their hopes, could have wished him to be.

He was the second child, and was born March 19, 1811. His education was begun in the schools which were under the sole government of the Friends; and he spent several years in their well-known classical academy, where his father had imbibed the rudiments of Latin, as well as Drs. James and Wistar, Physick and Dorsey. Having attained a sufficiency of Greek and Latin, he was transferred to the private boarding-school of John Gummere, in Burlington, New Jersey, a seminary of great and deserved reputation, particularly for mathematics, astronomy, chemistry, and natural philosophy. In Mr. Gummere, he had a shining example of all that is good and amiable in the human character, as also a teacher of profound wisdom and learning. The present writer had the honor of his acquaintance, and he now finds pleasure in quoting from his excellent biographer, Wm. J. Allinson—"That he had pupils from nearly all the States of this Union, as well as from some of the West India Islands, who have gone forth into the world enriched and ennobled by his wisdom and his counsels. Many of them had been for numerous successive years far from their kindred, regarding him as a kind and faithful parent; and such was the filial confidence he uniformly inspired, that it may well be doubted, whether there were any among all his disciples in whom love for him did not amount to a principle."

The little Parrish was here a distinguished favorite among his schoolmates, being naturally cheerful and happy, ever ready to indulge in the innocent sports of childhood. He excelled in the useful art of swimming, which was so much practised and so highly commended by Franklin; and, like his father, he delighted in skating, thus wisely mixing, as the philosophic poet says, the pleasing with the useful.

He began the study of medicine with his father in 1829, where most of us know that he must have enjoyed many and peculiar advantages over students in nearly all other situations. He gra-

duated in the University of Pennsylvania in 1832, just then entering on his twenty-second year. His thesis was written on spinal irritation, and it may be fairly considered as a very respectable performance for a man so young, giving thus early a good specimen of that clearness of thought, and of that perspicuous, precise, didactic style, which distinguished the author in riper years. He had spent the last year of his pupilage in the Blockley Hospital, and his experience therein appears to have suggested to him the subject of his thesis. Having been written from nature, it proved to be of so much importance that it was honored with a place in the *American Journal of the Medical Sciences* for August, 1832.

[Since this memoir was read to the College in January, Joseph Carson, Professor of Mat. Med. in the University of Pennsylvania, has sent me the following:—

"Dr. Parrish was a student with me in the Philadelphia Almshouse, during the winter of 1830–31. During our association, he was remarkable for his devotion to his profession, and especially desirous of acquiring practical knowledge. Of this I had ample evidence, from the fact that I was a senior student, and received from him frequent applications to partake of the opportunities presented in my department of the service which was distinct from his. The same application he made to others, and, indeed, he seemed anxious to avail himself of all the means of improvement the house afforded. He seemed to have a single purpose—the extension of his medical knowledge, and to this he adhered most closely. In this Institution, he collected the materials for his Inaugural Essay, and I well recollect the impression made upon me by the zeal and untiring devotion with which he pursued the object in view. I need not say how creditable was the performance, and what a true earnest it afforded of his subsequent course and position in the profession. Then, as afterwards, he exhibited capabilities of close application and sound reasoning.

"Among the many excellent traits of character, for which he was conspicuous, was his resolute moral firmness. I never knew him to swerve from a principle which had once been settled in his mind as a correct one; and so conscientious was he that seldom was he wrong in matters that pertained to duty. His intentions and sentiments were always honest, and expressed with so much

frankness, that no one, however widely differing from him, could bring an accusation of deception or unfairness. To the day of his death, the same impressions have remained with me with respect to this estimable man, whose loss to the profession, I conceive to be a great one."

Such were the fruits of a good education under the care of parents and teachers whose continual example was not only the brightest and best, but whose uniform conduct was amiable in the eyes of a youth, whose ancestors had transmitted to him no evil propensities. "Train up a child in the way he should go, and when he is old he will not depart from it."]

The cholera having reached Philadelphia a few months after he had graduated, his father was appointed by the city authorities as chief physician to one of the hospitals, and four young men were delegated as his assistants; of these four our late friend was one, and thus he was brought a little into public view; but with the exception of this promotion to the cholera hospital, I do not find that he had any accidental or extraneous advantages. His father was too delicate and conscientious to obtrude his son, and hence he seldom recommended him without mentioning others at the same time, that patients might feel themselves free to choose. The son, however, had shining virtues that could not lie hid; they were continually breaking forth in acts of benevolence that quickly brought him into favorable notice: hence he was elected in 1834 one of the Surgeons of Wills Hospital, to which he was ardently devoted during the rest of his life, a space of eighteen years.

This same year, 1834, he was married to Sarah Redwood Longstreth, daughter of Samuel Longstreth, a respectable merchant of Philadelphia. In this alliance, his older brother writes me, "he found a most congenial companion, who shared with him the toils and anxieties of life during a happy union of eighteen years."

We must now view him a young physician in his twenty-fourth year, a candidate for public favor in a great city, with many hopes entertained by his friends, and many critical and some jealous eyes now turned upon him, as the representative of his eminent father. But skill in medicine and public confidence are not heirlooms in a family, and therefore the young man must labor among the poor, and meet with many sore repulses from the rich, even

from some of those on whom his hopes had chiefly rested. His remedies are patience with infinite forbearance, the imperative *bear and forbear* of the Grecian philosopher. These are not only successful, but the necessary use of them in early life, serves to perfect the character of the rising physician; for there is no future period of his life in which these virtues are not pre-eminently useful. It is not often true in America, as Dr. Johnson said in London, that "a physician in a great city is the mere football of fortune." In our happier state of society, patient merit will generally command fortune and despise the doctrine of chances.

Dr. P. entered on practice when this city was replete with physicians of eminent merit and practical talents, who were great obstructions of course in his long, steep, and slippery ascent to the temple of fame; from our knowledge of his character, however, we cannot but fancy him as modest and unobtrusive, patient and hopeful, looking with cheering confidence to the time when diligent merit would find its reward. Nor was he disappointed, for every year brought an accession of business, so that, long before his death, his modest hopes were fully satisfied; for it was not in his nature to envy the patronage of older physicians now long established in the hearts of the people. Both his early and later friends concur in opinion that he never could have used any subtleties for the purpose of acquiring favor; they all aver that he was, in the highest degree, open, candid, honorable, generous; so that he might have said with the author of the *Rambler*—"I have seldom descended to the arts by which favor is obtained." Dr. West, who was his fellow student, and knew him intimately for twenty-four years, agrees with many others that a spirited independence was one of his striking characteristics. But this noble trait was so tempered with a modest respect for the opinions of others, as never to offend even the most sensitive arrogance.

If it ever happens that physicians advancing in age and rising to a lucrative practice, forget their poor friends who helped them to their early experience, Dr. P. was not guilty of this ingratitude. He not only attended faithfully many poor families who had long depended on his father for medical aid, but he gave much of his time to fresh accessions of this humble class, when his time was of great value; and the present writer has seen him treat them with the same kindness of manners and the same affectionate solicitude

with which he treated those *who were clothed in fine linen, and were fed sumptuously every day.* This I have seen when he has come to my house, and requested my aid, where there could be no hope of compensation in the present world. He might without arrogance have justly hoped, with the good Sydenham, "that when his last day should come, there would be a ready witness in his heart, that he had attended all his patients *of whatever condition* with the utmost fidelity, and that he had treated them all precisely as he could wish to be treated himself."*

His sense of our duty with respect to poor people, is well expressed in the following extract from a report he wrote as chairman of a certain committee of the Philadelphia County Medical Society. It is printed in the *Transactions* of the Pennsylvania State Medical Society for 1852. Speaking of gratuitous services to the poor, he says: "They are a part of the physician's duty as a member of an educated and beneficent profession; and upon his faithful performance of them, depend his own peace of mind and the preservation of the character of the body to which he has voluntarily attached himself. The committee would, therefore, be averse to any action which should in anywise contravene the established usages of the profession as laid down in our code of ethics; or which should detract from that high character for disinterested benevolence towards the sick and destitute which has for ages characterized the medical calling. We can refer with honest pride to the past history of medicine, as furnishing a more distinguished line of public benefactors than are to be found in any other calling. How many physicians, without the expectation of pecuniary reward or the hope of future fame, have calmly and resolutely braved the horrors of pestilence; and have even fallen victims to its ravages while attending with impartial fidelity upon the rich and the poor who, in the general panic, were deserted by kindred and friends? How often have the duties of the sympathizing friend, the attentive nurse, and the skilful physician been combined in the same person, when danger threatened and the

* Sane cum supremus vitæ instabit dies, confido mihi adfuturum alacrem in præcordiis testem, me ægrorum omnium, *cujuscunque demum sortis*, summâ fide ac diligentiâ salutem procurasse, quorum interim nemo à me aliàs tractatus est quam ego memet tractari cuperem.—*De Feb. Pestil. et Pest. annorum* 1665 *et* 66, cap. ii.

extremity seemed at hand? What higher character can we contemplate in the scenes of actual life, than the wise and good physician, the profound and learned medical philosopher, ministering with his own hands to the poverty-stricken victim of disease; cheerfully encountering the dangers, privations, and toils incident to his position, with the prominent desire of benefiting his fellow-man?"

With respect to his faithfulness in attending the poor, and the suavity of his intercourse with his medical brethren, I will here quote from a letter addressed to me by Dr. Littell, one of his fellow-laborers in Wills Hospital.

"Dr Parrish had been connected with Wills Hospital from its foundation, having been elected surgeon, together with Drs. Hays, Fox, and myself, in the year 1834. It was a favorite field of labor, and he brought to its cultivation the practical good sense and general philanthropy for which he was distinguished. While he never lost sight of the primary object of the institution—the relief of those who sought its aid—he endeavored to make it the medium also of disseminating a knowledge of ophthalmic medicine; inviting with this view the attendance of students, and freely imparting by lecture and otherwise the valuable information which he possessed. The responsibilities of his position were faithfully discharged; his attention to the patients was exemplary; and his deportment towards them kind and sympathizing. He warmly advocated an enlargement of the hospital, in order to fulfil more completely the beneficent purpose for which it was established, and was ever ready to co-operate in any well-devised plan for the accomplishment of this object. Unselfish in an unusual degree, he never hesitated to assume his full share of labor and responsibility; and his intercourse with his colleagues was characterized throughout by courtesy, delicacy, and propriety. Above all affectation of superior knowledge or skill, he always manifested for the opinions of others the deference and respect which were justly accorded to his own. Dr. Parrish was, as you well know, a man of upright and honorable feelings, far removed from all low or mercenary influences; and while regardless of personal considerations, intent only on maintaining the dignity and extending the usefulness of his profession. 'Full of love and sweet humanity,' he entered upon his mission of good to man; quietly and unosten-

tatiously performed the obligations it involved; 'nor made a pause, nor left a void,' until his benevolent career was closed in death. I look backward through the long period of eighteen years, during which we were associated in the surgical direction of the hospital, without the recollection of a single circumstance to disturb the harmony of our relations; and shall long deplore the bereavement which has deprived me of a friend and colleague with whom it was pleasant to take counsel and hold converse."

Dr. Hays was another of his associates in the hospital for eighteen years, as was also Dr. Fox for fourteen years. They both speak of his services, and the suavity of their intercourse with him, in the same spirit. Dr. Neill, who was also his colleague in the same hospital during some years, writes me the following letter:—

"His naturally benevolent disposition and the gentleness of his manners were well calculated to inspire the confidence and secure the affection of the sick. The children especially, of whom there were always a number in the hospital, were to him objects of peculiar interest; and by his paternal management of them, he induced them often to submit to painful operations—which severity could never have effected—thereby affording us a striking example of the controlling influence which a mild and sympathizing deportment will always give us over hospital patients.

"Dr. P. was the most active of his colleagues in bringing this hospital within the range of medical students as a clinical school. He gave the first regular course of instruction on ophthalmic surgery in that institution in the winter of 1839–40; and in succeeding years he was always followed through the wards by classes of students.

"As a lecturer, he was instructive and impressive; his voice was clear, and his enunciation distinct and emphatic. He was quick in seizing on the striking point of a case, and so great was his fluency and command of language that he never failed of impressing his auditors."

Dr. P. was strongly of opinion that Medical Societies might be so organized as to exercise an important government over the delinquent part of the profession, as well as to promote the diffusion of medical knowledge and to fan the latent fires of genius; hence we found him always ready to give time and labor

in their service. In this College, he was a conspicuous man; clear, precise, and forcible in debate, always winning the attention and respect of the house. His name appears very often in the printed discussions, and he wrote several very useful papers, besides five luminous "Annual Reports on the Progress of Surgery," all which are printed in the *Transactions* of the College.

In these, you will find that his sympathy with human suffering made him hail with enthusiasm the various reports on the anæsthetic powers of ether and chloroform; and though he was sometimes shocked, as we all have been, by hearing of deaths therefrom, he was yet by no means entirely disheartened; he remembered that the most useful medicines were not established without having done much evil through an incautious or ignorant use, and he therefore hoped the time was not far distant when ether and chloroform would prove as safe as bark and laudanum have now become. In this decision, his usual firmness, benevolence, and hope appeared in the opinion of some to predominate over his usual caution.

In the State Society, his accustomed activity was not wanting; he joined cordially in the business, and he wrote the Sanatory Report of the County of Philadelphia, which is published in the *Transactions* of the Society for 1851. He was one of the most conspicuous men in the County Medical Society, and was twice elected its vice-president. In fact, wherever a sense of duty led him, he found much to do, and he always did it with alacrity and vigor.

He felt from the first a sincere and even an affectionate interest in the establishment of the American Medical Association, and he was therefore appointed at the Convention of New York in 1846, one of a committee, whose duty it was to report on the subject of taking from colleges and other interested corporations, the right of conferring degrees and licenses to practice. He wrote a report on that subject for the Convention of Philadelphia in 1847, and it was printed in the *Proceedings* of that year. This document is worthy of being read again and again, by all who are ready to judge hardly of others, without knowing whether they themselves would do better in similar circumstances. It is remarkable for its honest casuistry, as also for its firmness on one side and its mildness on the other. It asserts that abuses did exist, as in all other human things, but that the remedies were not to be rashly admi-

nistered by impetuous and sweeping hands—rather by gentle means gradually advanced, as favorable and safe opportunities might open the way.

Thus, after showing the utter impossibility of obtaining relief from State legislatures, and the utter hopelessness of voluntary reform in many of the schools, he says: "There is a power more potent than that exercised by legislatures, or by the corporations which they may create; it is the influence of combined and harmonious action, directed to a special object, by the great body of the medical profession. This power, which is popularly termed public sentiment is, in this country at least, the most potential agency which can be brought to bear upon the errors or vices of the age, in whatever form they may be presented. It is, in fact, the source of law, and, in a republic, constitutes the mighty lever by which the powers of government are moved and its decrees enforced. Now, we must bring this great lever to bear upon the errors and abuses that exist in the medical profession; and, if well directed and skilfully applied, there cannot be a doubt that it will prove more effectual in removing them than appeals to legislatures or any partial attempt to remedy special evils."

In the next page he says: "If, then, the Medical Association should embody, as we believe it will, a large portion of the respectability and intelligence of the profession, and should assume a permanent and well-disciplined form, we feel assured that any changes in the existing order of things which it may propose to the medical colleges of the country, will meet with the most respectful consideration."

This was the benevolent sentiment of an honest mind, filled with that charity which, St. Paul says, believeth and hopeth all things; nor was the author entirely deceived in his expectations, nor did he, as we humbly pray, believe and hope too much; yet six years have nearly gone by, and the changes for the better are perceived with difficulty. Let us, however, live, like Dr. P., in the hope that the sanative influence of this great and useful body will finally prevail.

At the meeting of the Association at Baltimore, in 1848, he was appointed one of a committee on Public Hygiene; and, at the meeting of Boston of 1849, he read an able paper "On the Sanatory Condition of Philadelphia," wherein he showed in strong colors the

growing evils of a large and increasing city, and how they are sadly neglected, till remedies are hopeless, if not impossible. He shows what evils the inordinate cupidity of the landlord brings on the community, by building up alleys and courts with sub-courts, thus shutting out light, air, and therefore health, from the unfortunate inhabitants of these dreary abodes. He descants largely on the evils of those crowded habitations in generating typhus fevers, cholera, and infantile summer diseases.

In page 469, he says: "While taste and elegance adorn the mansion of the rich, and increasing splendor may mark the structures which public munificence or private enterprise rears to charity or science; yet, if the dwellings of the poor are neglected, if light and air are shut out from their abodes, and avarice is allowed to feed and fatten on their helplessness, we shall fail in establishing cities worthy of that high destiny to which our country aspires. It is the boast of the republic to guard with an equal eye the happiness and interests of all classes, and especially to protect those who, from adverse circumstances, may be exposed to privations and suffering, at the hands of their more favored fellow-citizens; let our legislatures, then, be inspired with the genius of our institutions, and act on this principle, and the work which we advocate, will be speedily accomplished."

In the same report, he speaks concerning the necessity of better methods of draining and cleansing the city; and he says much on the great neglect of ventilation, both in private houses and public buildings, particularly schoolhouses. He treats, also, of our prison discipline, and of its effects on the mind and body of criminals—a subject to be resumed as we proceed.

This highly valuable report makes thirty pages of the *Transactions*, and is thrice worthy of a serious consideration by legislatures, councils, and particularly by those who are building up courts and alleys, which may put money in both pockets at the expense of the health and lives of the poor. The author holds forth a true mirror, in which they may see themselves as they are—prodigal of money in whatever may increase the population of the city, almost abandoned as it respects the conservation of health and morals, in the accumulating mass of vicious and suffering humanity. When I heard this masterly report read at Boston, I expected some vigorous measures would be recom-

mended, since it applies to other cities as well as our own; but, alas! the warning voice of the physician is too often disregarded.

We have already said that he wrote many valuable papers, which are printed in the *Transactions* of our College; we shall now take leave of him in his medical capacity, by noticing an essay which he published on "Congestive Fever," in the *Amer. Journ. of the Med Sci.* for 1845. The author wishes to show that congestion is not the cause of prostration in this fever, that hence this prostration is not to be treated by bleeding. He considers the congestion a mere symptom of feeble innervation, and therefore to be treated by stimulants. It is an able argument, extending to 16 pages, but a review would be foreign to the object of this memoir. It is a subject involved in clouds, which even the light of experience, with the heat of controversy, has not been able to scatter.

The term *congestive fever* is very erroneous, and always uncertain, since many fevers—remittent, yellow, typhus, scarlet—are often attended by this symptom. It is an accidental condition of the system, and ought, therefore, to be called the congestive *state* of this or that fever. That it does sometimes exist, is certain, even in cases which do not admit of bleeding; that it is often suspected when it does *not* exist, is very probable; that it is often cured by bleeding, ample experience, from Sydenham downwards, has proved; it is equally certain that it has often been cured by stimulants. Happy must be the physician, and fortunate too, who decides promptly on the method appropriate to each peculiar case.

It was not merely in medicine that Dr. Parrish's benevolence shone conspicuous; he mingled with the philanthropists of our city, and sought other modes of usefulness. Wherever, indeed, there was misery to be relieved or vice to be prevented, there his mind was directed, as all congenial spirits who conversed with him can testify. With respect to his readiness to serve the despised children of Africa, he was brought up, it might be said, at the very *feet of Gamaliel;* he therefore served them faithfully, not only in his medical capacity, but he extended the hand of friendship to them in many ways. He was very early made a member of the "Society for the Abolition of Slavery," of which Franklin Rush, and Wistar had been presidents, and he was a member of the Board of Education, whose province it was to devote a con-

siderable fund to the schooling of the colored race. He hated slavery, but he was filled with charity and kindness for the holders of slaves, considering them as equally oppressed with the slaves themselves.

Here we must remember that he belonged, both by birth and education, to a sect of Christians who have from their very origin, 200 years ago, distinguished themselves, above all other people, by their resolute and firm maintenance of personal, religious, and civil liberty. Kings have often yielded to their persisting importunities, and honored even their boldness. Barclay cautioned Charles II. against the tyranny of his government, and wrote to him: "Thou hast reason to know how hateful is the oppressor, both to God and man;"* and the illustrious Penn struggled hard with James and his ministers for this triple liberty, though opposed by the Church of England, backed by the whole body of the Presbyterians, Covenanters, Independents, Roundheads, and Whatnots, till he finally established it in this happier land, which has since assumed the motto—alas! more appropriate in his own time—*Virtue, Liberty, and Independence.*

Dr. Parrish was elected a member of the Philadelphia Society for Alleviating the Miseries of Prisons; hence he soon became a frequent visitor of the penitentiary, as Dr. Robert A. Given, then resident physician, writes me, "examining the arrangements of the cells, and closely inspecting the health of their inmates."

He must here have found an exhilarating pleasure in looking back to the labors of his grandfather, Isaac Parrish, who was also deeply concerned for many years in the reformation of prisons. The first meeting of citizens, to take into consideration the condition of the Philadelphia prison, was had in the year 1778, and was held at this grandfather's house. What good man would not rather have such things told of his ancestor, than that he had conquered Mexico, or had even conducted our revolutionary armies? "I would rather," exclaimed an American colonel, at the grave of a sainted man, "I would rather be Anthony Benezet in that coffin, than Gen. Washington with all his fame."† "My boast," says the pious Cowper—

* Preface to his Apology.

† Rush's Literary and Phil. Essays, and Lemprière's Biog. Dict.

"My boast is not that I deduce my birth
From loins enthroned, and nobles of the earth;
Far higher, far, my proud pretensions rise,
The son of parents passed into the skies."

But, to resume our subject—Dr. Given had already obtained the correction of some prominent evils that tended to the injury of both mind and body; he had also shown that there was a great amount of mortality and insanity among the convicts, an alarming fact, which some of the older advocates of solitary confinement were not willing to hear or to credit. "The effects of our discipline on health," says Dr. Given, "were entirely unsuspected, its friends being so dazzled by its supposed moral influences as to be totally blind to its physical and mental evils."* These men, thus wrapped up in their admiration of solitude and darkness, were indeed so dazzled by the light which Dr. Given had flashed in their faces, that they averred positively they could see nothing, and that there was nothing to be seen; like father Gobbo in the "Merchant of Venice," they confessed themselves "sand-blind." Dr. Parrish now came in to the support of Dr. Given, some of the Prison Discipline Society joined them, and, with difficulty, they procured an appointment of physicians to inspect the penitentiaries of neighboring States, wherein the opposite or *congregate* system of discipline was in use. The commission was instructed to inquire into the physical and mental health of the convicts, and to examine the construction, discipline, domestic arrangements, system of labor, and all matters pertaining to the controversy respecting the two modes of confinement—the *gregarious*, and the *solitary*.

Of this laudable and highly responsible commission, Dr. P. had the honor of being a member, nor would it have been easy to find a mind more adapted to the business. He had been for some years very seriously exercised in this controversy, and he had therefore made it a subject of conversation and inquiry in his various intercourse with the philanthropists, to many of whom he was known through his own merits and those of his beneficent father. He read a paper to the Society in 1849, about two years after his return, entitled, "Recollections of a Tour of Observation to the

* Twenty-third Ann. Report, p. 25.

State Prisons of Maryland, New York, Rhode Island, Massachusetts, and Connecticut." The Society ordered it to be published, and it appeared accordingly in vol. vi. No. 1, of the *Pennsylvania Journal of Prison Discipline.*

It is an able and beautiful report, in which joy and sorrow, approbation and reproof, succeed each other as they ought to do in every mind that is sensible to the sufferings of humanity. In all the prisons he found something to commend, and in Boston, particularly, his heart was gladdened with some improvements, which he had not seen at home, and did not expect to see abroad. He started on this journey with a humane but an enlightened prejudice against solitary confinement, as rigidly administered in the Eastern Penitentiary, and though no man could be more open to conviction, or more ready to confess an error, it is plain from the tenor of his "Recollections," that his fears for both mind and body in solitude were not lessened by what he had seen in the *congregate* prisons.

He then continued his investigations at home, and particularly in relation to the effects of solitary confinement and sedentary labor on the African race. Dr. B. H. Coates, a member of the same Society, had called their attention as early as 1840 to the peculiarly injurious operation of solitude and sedentary labor on this companionable people, naturally fond of talk and sunshine; and he subsequently brought the subject before the American Philosophical Society, in a scientific communication, which was published in their *Transactions* for 1843. This paper attracted much attention at the time, and caused no little discussion; but, strange indeed, it led to no practical results.

Hence it was that in April, 1849, Dr. P. brought a resolution before the Society, for the appointment of a committee, to report on the disproportionate mortality and the relative length of sentences between the white and colored prisoners. He wrote the report, and read it at the meeting of the Society in November, 1849. They ordered this paper to be printed entire in the next number of their Journal, that two hundred and fifty extra copies of the Journal be printed, and that copies of the report itself be sent to the Governor, to the Judges of the Supreme Court, and of the Courts of Common Pleas.

In this report, he shows that the mortality was much greater

among the negroes than the whites; and he quotes the authority of Dr. Darrach, formerly visiting physician, and also the labors of Dr. Coates, in proof of his statement. But he gives also the statistics of mortality for twenty years, and shows that in the whites it averaged 4½ per cent. per annum, while the negroes perished at the rate of 18 per cent. In the County Prison, the disproportion was nearly the same; and also nearly the same at Pittsburg and Trenton. He acknowledges that the mortality of the blacks is greater outside of the prison; as Dr. Emerson has shown, that during ten of the above twenty years, the deaths of negroes was 3¼ per cent., and that of the whites, 2.37. Accordingly, four blacks to one white die in prison, while in the open community not quite two to one. "Causes," he says truly, "must, therefore, exist in the prison which produce results that do not exist out of the walls." These causes he finds, as did Dr. Coates, in the peculiar corporeal and mental constitution of the African, that requires company, merriment, sunshine, and exercise, with warmer apartments than our penitentiary meanly and criminally affords.

In this highly valued report, he brought to light a mysterious practice of our courts, which ought to be considered by the public with no little solicitude. The negroes, for the same crimes, were almost universally sentenced for a much longer time than the whites, or, as Voltaire calls them, the ash-colored people. He shows too that the whites are pardoned at the rate of 15 per cent. with their *short* sentences, and that the negroes, with their *long* sentences, are pardoned at the rate of only 3 per cent. This prospect, then, of a long confinement, without hope of pardon, operates on the mind and indirectly on the body, causing both mental and corporeal depression that tends to consumption and scrofula. This is another reason, then, for the greater mortality of negroes; for this depressing influence must increase, as do the squares of the months to be spent in hopeless solitude and darkness.

But Dr. P.'s labors in the cause of the prisoner d'd not end even here; he seems to have had continually before him the memorable words—"*I was in prison, and ye visited me.*" He read to the College in 1851, a paper "On the Mortality and Insanity in Separate-plan Prisons in England and America." It is found in Vol. I. New Series, page 173, of the *Transactions*. His object is to

show that long sentences are dangerous to the health both of body and mind. In England, separate confinement is, for the most part, merely preparatory to transportation; therefore, the time is short, seldom exceeding a year, and the deaths, though considered by the English themselves as too many, are yet few in comparison with ours. So with respect to insanity—the amount is alarming to the English authorities, though small when compared with ours in the Eastern Penitentiary.

Now, do you ask, what all these labors and writings tended to, or what they have effected? *In the first place*, then, they satisfied the requirements of an enlightened conscience, which found, in the final retrospect, no work left undone, no duty neglected; he, therefore, had not, in that awful hour, to look back, as Persius says, "on life as on a murky day, and to groan away the few minutes then left him."*

In the second place, these exertions greatly assisted Dr. Robert A. Given, the resident physician, in curing some of the various evils then existing. When this gentleman began his useful career in that house, being one of those benevolent youths, who cannot see misery without burning to relieve it, he quickly enthralled himself with various projected reformations. He won over to his side, by patience and perseverance, a portion of the Inspectors and of the Prison Society. Hence various improvements were made: baths, flannel under-clothes, and a better diet were introduced; it was forbidden to wash the cells, by which watery folly they had been made damp and unhealthy;† ventilation was attended to; a school-master was introduced; singing, whistling, and musical instruments were at last permitted, by which the obdurate heart might be softened, and the sinking spirits revived; religious newspapers were brought in, and a more free admission of friends was permitted. Such were some of the ameliorations introduced by Dr. Given's urgency.

But there was a portion of the Inspectors, as well as of the Prison Society, who were very unwilling to hear the salutary truths

* Tum crassos transisse dies lucemque palustrem
Et sibi jam seri vitam ingemuêre relictam.—Sat. v.

† The cells ought to be scoured with dry sand, and this warmed in winter. The Romans scoured their pavements with sand, and sometimes with sawdust.—Juvenal, Sat. xiv. 67.

that were vehemently urged by the resolute Doctor. These strenuous conservators of old things, whether good or evil, "loving darkness rather than light," were obstinately opposed to every whisper that could bring obloquy on their favorite system of punishment by solitude and darkness. Hence, when they were told how great was the amount of mortality and insanity; how great and how useless, nay, how injurious, were many severities and deprivations; how criminally filthy and poisonous were the cells; they were astounded by the audacity of the medical profession, and hardly granted the importunate Doctor a patient hearing. It was in this state of things, that Dr. Parrish, as a member of the Prison Discipline Society, stepped forward and lent the struggling Resident Physician the whole weight of his influence. This fact may be seen from the following extract of a letter from Dr. Given to the present writer.

"Such facts were communicated to Dr. Parrish, as confirmed his long-entertained fears, that however wise, in a moral light, the principle of separating convicts, the administration of the system at the Eastern Penitentiary, was attended by such hygienic and disciplinary defects as must necessarily produce an undue amount of suffering and death. To remedy these defects, however arduous the task, Dr. Parrish at once resolved. But, with characteristic prudence, he determined that neither his own suspicions nor the representations of others, should induce him to resort to active measures, till personal observation had established the truth. He became, therefore, a constant visitor, examining the arrangements of the cells, and closely scrutinizing the health of their inmates. These investigations, in themselves physically and morally repulsive, satisfied him that the amount of insanity and death was quite disproportioned to the number in confinement. Different views, however, were still maintained by a large majority of the Prison Society, and it was argued by them, that a similar scrutiny of the *congregate* prisons would show an equal degree of physical and mental disease. To solve this question, it was now proposed that a committee of physicians should be appointed to visit the *congregate* prisons of the Union, and to report on the general health of the convicts."

Dr. Parrish's *Recollections* of this tour, we have already noticed, and said that they did not lessen his fears for the effects of soli-

tary confinement. He therefore continued his investigations; he discussed the subject earnestly in the Society, as well as in private conversations, and he wrote the important paper already mentioned on the "Health and Mortality of Convicts," which was extensively circulated by the Society, and has made such an impression on our courts that they have acknowledged the propriety of shorter sentences. All the reforms which we have mentioned or alluded to, and some others, are carefully noted by Dr. Given, in his *Annual Report*, for 1851, published by the Inspectors. Death and insanity have been greatly diminished the last two years, nearly two-thirds; and no other cause can be assigned than the improvements suggested and importunately urged by Drs. Given and Parrish.

[When this memoir was read to the College last January, I was not informed of one fact to which I now request the reader's attention. So earnest was Dr. Given in the prison reformation that he requested the aid of Dr. Charles Evans in examining the state of things, and in remonstrating with the advocates of the old discipline. Dr. Evans gave his aid promptly; and finding so much of death and insanity, he voluntarily wrote an impressive letter to the Inspectors in the summer of 1848. This benevolent effort having effected nothing, the three medical brethren, Drs. Given, Parrish, and Evans, continued their labors, and urged the Committee of the Prison Discipline Society to call a special meeting for discussing the subject. This was done; and the Judges of the courts with other respectable citizens attended. Dr. Evans here gave the result of his investigations, and urged an immediate reform in some parts of their discipline. Drs. Bell, Coates, and Hartshorne, with Judge Kelly and others, joined him. The Committee then requested Dr. Evans to write out his opinions; this he did in a very authoritative and yet polite manner; and the Inspectors were brought at last to perceive the necessity of the changes proposed.

This is one among many proofs how hard it is for physicians, however able and devoted, to gain a hearing from the arrogant self-sufficiency of public officers.]

We are now to consider briefly the claims of Dr. P. as a writer; and here it must be remembered that he wrote nothing to serve the purposes of present or posthumous fame. All was written

through a present sense of duty, without an author's ambition, or any object save that of doing good. He wrote with facility in a correct, perspicuous, precise style, and often with much beauty and simple unsought elegance. He always went directly to the end of his period, without stepping aside for the sake of ambitious ornaments; hence it would be difficult to find among our medical writers more than a very few whose style and manner are more suited to didactic purposes. Nor was he incapable of some variety. When this College had to mourn the death of its vice-president, Dr. Otto, our friend was appointed to write a memoir of this venerable man; and he did not fail to give a beautiful specimen of biography, as well as a general proof of his abilities in this difficult department of writing. Those of us who knew Dr. Otto, know well that it is written from nature, and founded in plain unvarnished facts, without fanciful distortion or even exaggeration. He did not imagine a perfect man, and then describe what he saw in his own mind; but he painted from nature, and we all know that the picture is true. When Milton began to aspire to posthumous fame, he hoped that he would be able to write something that his "countrymen would not willingly let die." What the great poet hoped to do for his country, Dr. P. has done for the family of Dr. Otto; they will surely cherish this biography, and thank the author through many generations; in the language of Milton, *they will not willingly let it die.*

In his various writings, he always appears fully master of his subject, and to have made the best distribution of the different parts, so as to render his piece both luminous and attractive; thus showing a full comprehension of his subject without neglecting the minute particulars, always abounding in medical description. Had he lived to practice and to write another twenty-one years, he might have proved one of the most distinguished benefactors of our science among the medical literati; for he not only had talents for communicating knowledge in an easy and pleasing way, but he was too good a man to pass through life without doing his part in the improvement of medicine, and "straining every nerve," as Sydenham said of himself, "that the cure of diseases after his death might be conducted with greater certainty."*

* —— omnes animi nervos intendisse, ut siquo modo fieri possit, morborum medela post cineres meos majori cum certitudine administraretur.—*De Feb. Pestil. et Pest.* Ann. 1765–66, cap. ii.

With respect to his domestic and civil relations, he was a truly exemplary man; a tender husband and father, an affectionate brother, a kind neighbor. No disinterested man ever had reason to complain of his conduct and bearing; so that we may say of him as it was said of Sir Joshua Reynolds, "that if any man had quarrelled with him, he could not have found it possible to abuse him."

The accumulation of property he almost wholly disregarded. He did not affect to despise money, nor did he part with it imprudently; but he did not seek riches as earnestly as most other men, even the good, are accustomed to do. Leaving his pecuniary affairs to his wife and older brother, he pursued the even tenor of his placid way, in visiting the sick and relieving the distressed. We have already spoken of his faithfulness in attending the poor; it remains to be said that his purse was freely opened to them, both in private and public beneficence; and to this must be added, the time that he spent in benevolent societies, when time was the same thing to him as money.

Like his father, he never enforced the payment of his bills; but whether this leniency be always commendable, may admit of a question. It may add to the physician's dignity, and save him many unpleasant collisions; for what can be more humiliating than to appear in Court for the purpose of enforcing the payment of our fees? But the relinquishing of them will encourage the dishonest, and multiply their number; thus injuring other creditors who may be very unable to sustain the loss. I believe the majority of this College would not recommend the general adoption of this gentleness towards vicious debtors. Goldsmith says of his village curate, that "even his failings leaned to virtue's side;" but the virtue itself of the Parrishes appears to me to have leaned a little in this case, when it ought to have been perfectly erect.

With respect to that all-important subject, *Religion*, Dr. Parrish was a genuine Quaker on the primitive model, precisely such as George Fox, or William Penn, or his venerable father could have wished him to be. He used, of course, what the Friends call their "plainness of speech, behavior, and apparel;" a lame and unsteady tripod, from which many have fallen, and whereupon few can sit to their comfort. This threefold peculiarity has given

them infinite trouble for many generations; and, as the present writer has long thought, with great loss and no profit. It was no trouble, however, to the meek and humble Dr. Parrish; it sat easy upon him, like a born-gentleman's native urbanity, in whatever company he happened to be. Nor could any of us who knew the father, wish that the son had thrown off the hereditary costume and manners; we should have felt, that there was a want of due respect to the wishes and comforts of a virtuous ancestry.

Though a strenuous Friend in his manners, customs, and doctrines, he was deeply impressed with St. Paul's opinions of charity, and was always ready to mingle with mankind in whatever was truly innocent. Thus, while music was neither pleasing to his ear nor consistent with his religion, he rejoiced greatly on hearing the poor inmates of the solitary prison, as Dr. Given tells me, softening their incommunicable sorrows by whistling and singing.

He was as free from pride as a just sense of the dignity of human nature would admit; and vanity was an entire stranger to his mind. His soul was meek and humble: though relying with confidence on his faith, it was no part of his religion to arrogate peculiar merits, or to *thank his heavenly Father that he was not as other men were.*

He was a very faithful attendant of public worship; and he always endeavored to arrange his business so that this duty might not be prevented. Nor was he often absent from those business meetings of the Society which are regularly held for the purposes of internal discipline and acts of special beneficence. In these meetings he was a ready speaker, and his speeches, as I have been told by an elder of the church, were always heard with respect; in the language of Friends, "they were always very acceptable."

Such was the truly catholic and spiritual religion of Dr. Parrish; and we shall find that in his last hour, it did not deceive him. So serene and hopeful was he when death hovered over him, that he might have called his friends, as Addison did Lord Warwick, "to see in what manner a Christian could die."

He was of a slender, delicate frame, always endowed with more vigor of mind than body; and, during his last year, he suffered almost continually from dyspepsia, which greatly lessened his strength. The last twenty days previous to his sickness, were

spent with all the labor and anxiety of a parent, in attending day and night on his eldest son, who had sickened with a fatal dysentery, near Christiana, about fifty-seven miles west of Philadelphia. He had the sorrow of seeing his child in a hopeless state, when he was suddenly and violently seized himself with the same disease. He had struggled with it to the fourth day, when this mortal dysentery invaded the family of Levi Pownall, in whose hospitable mansion he lay; and it was therefore thought best by himself, wife, and brothers, that he should be forthwith brought to his home in Philadelphia. Here was a severe trial of his fortitude, for it was necessary to leave his child, whom he had little hope of seeing again, and to leave his wife to attend this child, while he was beginning, what he must then have feared, might be his journey to the grave. Notwithstanding his tenderness and sensibility, which were always great, he bore this cruel separation with the fortitude of a man whom nothing could deter from his duty.

Soon after his reaching home, it was too clearly seen that his disease was eluding the powers of medicine, and his wife was therefore sent for, to leave her dying child with her friends, that she might not be absent from the closing scene. He looked to his approaching end with firmness and composure, professing with his accustomed humility, his unworthiness of a seat in the heavenly kingdom, but filled with hope and confidence in the mercies of God, that he was now going to receive the rewards of a well-spent life. He breathed his last without pain or struggle, about 1 o'clock on Saturday, the 31st of July, 1852, in the forty-second year of his age.

His child at Christiana, a noble boy of fourteen years, died the same hour; and, to complete the melancholy story, the amiable and good Mrs. Pownall, who, with her benevolent husband, sons, and daughters, had afforded the distressed family every comfort they could desire—this excellent woman died of the same disease, the day Dr. Parrish and his son were buried.

He left a widow with seven children, and to her he bequeathed the care of all his property, with a just and merited confidence in her integrity and wisdom; expressing at the same time, his last wish for his children, that they should be carefully educated in the reverence and love of God.

Few deaths have occurred among the Philadelphia physicians, which so astonished and saddened the hearts of the medical brethren as did that of Dr. P. When age or infirmity has shown for some time that death is approaching, the mind—even the one most tenderly allied—is imperceptibly obtunded by the coming calamity, and meets with some firmness, the last blow: but, Dr. P. was yet in his forty-second year, and was seen but a few days before, full of his usual activity and hope, diffusing health or comfort among his numerous patients. On Sunday night, his wife and children saw him in full animation; the following Saturday, they beheld him a mass of clay, from which the immortal spirit had fled forever; no longer present to assuage their breaking hearts. Such is the uncertainty of human things, and such the mysterious decrees of Heaven: "Man cometh up and is cut down as a flower, he fleeeth as it were a shadow."

He has indeed fled from our sight forever, but his virtuous and useful life, his animating conversation, his vigor in debate, his joyful and happy countenance, his cordial salutation and welcome, none of us can ever forget: these will long remain among our tender recollections; while his active benevolence, and his sympathy with all the afflicted, went before him to the world of spirits, where they must now be his crown of glory that can never fade away. Farewell, then, thou sainted spirit; the prayers and blessings of the poor and the friendless, the widow and the orphan, the prisoner and the stranger, do now consummate your everlasting happiness in Heaven: *they were hungry, and you gave them meat; they were thirsty, and you gave them drink; they were strangers, and you took them in; naked, and you clothed them; sick and in prison, you visited them.*

Stated Meeting, March 2, 1853.

Dr. Wood, President, in the chair.

Present, twenty-eight members.

CASE OF UTERINE DISEASE TERMINATING FATALLY.

Dr. C. D. Meigs remarked that he was desirous of calling the attention of the College to a case which had lately occurred to him, of deep and painful interest, and which he believed was of some importance as illustrating very forcibly certain points in the pathology of the female:—

On Saturday last, Dr. Meigs attended a lady during parturition. She gave birth, about eight o'clock in the evening, to a child, at the termination of the two hundred and tenth day of gestation. She had been already the mother of two children, the youngest of which was ten years of age. During these ten years she had not been pregnant, but had suffered from retroversion of the uterus, from which, during the last year, she appeared to have become entirely relieved; a supposition which was in some degree confirmed by the fact of the occurrence, again, of pregnancy. About twenty-five days ago she was attacked by symptoms of a very unusual character, for which Dr. Meigs was consulted. He found that there was an enormous development of the uterine tumour, supposing the lady to be actually no farther advanced than the seventh month of gestation: she suggested that probably there were twins. Upon carefully ausculting the abdomen, Dr. Meigs could not detect the pulsation of the fœtal heart; though, upon the application of the hand to the uterine tumour, vigorous movements of the child were distinctly felt. The lady was not actually ill, but complained of undue distension from the enormous size of the uterus. It was supposed that there might be an excess of liquor amnii. When Dr. Meigs visited the lady again, she still complained of the uneasy sensations produced by the over-distended uterus, which was become still larger. The Doctor suggested that she was probably mistaken in her calculations as to the period of her pregnancy, but she persisted

that she was perfectly sure she had not advanced beyond the seventh month. At the end of two or three weeks, the pain, weight, and dreadful sense of distension which the poor lady experienced, became almost insupportable. The uterus was actually larger than at the full term. She was still positive as to the correctness of her calculation in regard to the period of the pregnancy. Dr. Meigs supposed her to be suffering from constitutional disturbance induced by the undue hypertrophy of the uterus, the result of the abnormal distension to which it was subjected. When, in pregnancy, the physiological hypertrophy of the uterus which indispensably occurs, proceeds at the normal rate, no constitutional disturbance takes place; but, when the rate is unduly augmented, it is easy to conceive that it may assume a character bordering closely on actual inflammation—the physiological augmentation of bulk giving place to one of a pathological character. Dr. Meigs's opinion as to the character of the present case was formed from the facts elicited in that of a young lady who had suffered after impregnation from a horrible sense of overdistension, attended by anæmia, debility, and emaciation. She rapidly grew worse and worse. When she came under the care of Dr. Meigs, she was in a condition of extreme danger. She was in the fifth month of her pregnancy. Upon examination, the Doctor found that the os uteri was open, and having the condition appropriate to the full period of utero-gestation; on withdrawing his finger, he found adhering to it a hydatid—this revealed to him the condition of things; he accordingly thrust his finger into the cavity of the uterus, and turned out a large mass of hydatids; the womb speedily contracted, and the lady got well. Thus all was explained; the ovum had undergone a hydatid degeneration; in consequence there was a large and rapid growth of hydatids, by which the uterus had been too *rapidly* distended; hence the general disturbance causing the anæmia, the emaciation, and the hectical symptoms.

But to return to the first patient. On Thursday last parturient pains set in; the cervix uteri began to open. Yet, the head, the moment it was touched by the finger, flew up beyond its reach, as if the child was swimming in the midst of a large collection of water; the sounds of the fœtal heart could not even now be heard. Dr. Meigs was perfectly aware that he could, by perforating the

membrane, relieve at once the dreadful sense of distension under which the patient was laboring; but, at the same time, he knew that by so doing he should endanger the life of the child. He therefore preferred to wait, using all those means calculated to aid in the relaxation of the os uteri which he believed were adapted to the case. The os uteri at length gradually gave way; and, when it was dilated to about one inch in diameter, Dr. Meigs broke through the peculiarly tough membranes; to effect which, he was under the necessity of cutting his finger-nail so as to give it a serrated edge. The instant the membranes were ruptured, there issued, with a gush, a quantity of fluid, which upon computation was estimated at full two gallons. The patient immediately experienced great relief. It was about thirty hours before the os uteri was fully dilated, and the fœtus expelled. Two days before this occurred, Dr. Meigs, from the symptoms of which the patient complained, was apprehensive that inflammation of the broad ligament extending up to the ovary, was about to set in; he accordingly drew from the arm some blood, which gave relief, and no doubt tended to promote the relaxation of the os uteri. The uterus appeared during the labor, to have but little expulsive force. After the expulsion of the fœtus and placenta, Dr. Meigs directed the patient to take thirty drops of laudanum, and some light nutriment. She passed a tolerably quiet night. On visiting her early on the following morning, Dr. Meigs found the abdomen to be swollen to a size larger than before delivery, and tense, with pain, upon pressure, over the whole pelvic region—the patient vomiting every few minutes. He had no doubt that extensive peritonitis and metritis had now set in. He accordingly set the patient up in bed in a semi-recumbent position, and believing it was only upon a prompt detraction of as large an amount of blood as she could bear that any dependence was to be placed for the arrest of the inflammation—that all other remedies were futile—he opened a large orifice in a vein in the arm, intending, if possible, to take away some twenty-nine or thirty ounces of blood. After the loss of about fourteen ounces, the pulse giving way, Dr. Meigs arrested the flow, and lowered the head of the patient. After waiting some eight or ten minutes, finding that the patient did not complain of exhaustion, and was willing to allow the blood to again flow, he withdrew his finger from the orifice in the vein; but did

not consider it prudent, after eight more ounces had been lost, to carry the bleeding any farther. The patient appeared to be much relieved by the operation. On the next day she was nearly apyretic; she bore pressure made upon any part of the abdomen with but little inconvenience; but the tympanitis continued as great as ever, nor could Dr. Meigs effect any permanent reduction of it. The patient rapidly grew weaker and weaker, and died early on Tuesday morning.

This case, though a fatal one, has to me, Dr. Meigs remarked, been one of very great interest, as exhibiting the morbid influences of excessive and too rapid gestative hypertrophy of the womb, from over-distension of the organ.

To show the different effects produced by excessive distension of the uterus slowly induced, in an otherwise healthy organ, from those occasioned by a rapid distension occurring in a diseased uterus, Dr. Meigs adduced, in contrast with the foregoing case, that of a female whom he was invited by the gentleman having charge of it, to see, about two or three years ago. The patient supposed herself to be pregnant, but the physician, a well-educated and experienced practitioner, who was in attendance, supposed her to be laboring under ascites. Upon examination, Dr. Meigs found that the os uteri was tubular; he was unable to detect the presence of a child by auscultation, ballottement, or any of the usual tests. The indications of effusion within the abdomen were very striking. The patient was pale, emaciated, and feeble, with a rapid and weak pulse. Dr. Meigs opposed a resort to paracentesis. Finally, however, the patient became so extremely ill, that it was absolutely necessary to do something for her relief; but before a decision as to what should be done was arrived at, she was seized with sudden pain, and the uterus gave discharge to a great quantity of fluid—a large pailful—followed by a seven months' fœtus. The recovery of the patient now took place rapidly and completely. The lady of whom I first spoke, remarked Dr. Meigs, had an unhealthy womb, she had suffered for a long time from retroversion of that organ, and her uterine development took place with great rapidity; but in the case last detailed the womb was healthy, and its development was more slowly induced.

Dr. RUSCHENBERGER presented the following

REPORT ON METEOROLOGY AND EPIDEMICS FOR THE YEAR 1852.

The range of the thermometer for the year 1852, was 96° Fahrenheit, or from 2° below zero to 94° of Fahrenheit's scale. The range for the year 1851 was 9° less, or 87° F.

The mean temperature of the year, was 53.55° F., or 1.51° F. above the average mean of sixty years, and .45° F., not quite a half degree, less than the mean temperature of the year 1851.

The quantity of rain and snow which fell during the year, was 45.749 inches, or 10.249 inches more than in the year 1851, and 1.989 inches more than the average of twenty-five years.

The following table exhibits the maximum and minimum temperatures, noted at 9 o'clock A. M., and the mean temperature of each month in the year, together with the dew point and quantity of rain. It is derived from observations made and recorded at the Pennsylvania Hospital by Dr. John Conrad.

The winter of 1851–52, has been considered more than ordinarily cold, and the summer has been characterized as unusually hot. Yet the mean temperature of the year has not reached two degrees above the average.

Meterological Summary for the year 1852, *from the records of the Pennsylvania Hospital, kept by John Conrad, M. D.*

	Temperature.						Hygrometric Observations.			
	9 o'clock A. M.		Mean of the month.	Range of therm.		Average for 60 years.	At 9 A. M. dew point.	At 9 A. M. degree of dryness.	Inches of rain.	Average of 25 years.
	Max.	Min.		Max.	Min.					
January	33.23	21.77	27.5	50	—.2	30.46	14.41	11.05	2.011	3.23
February	39.96	28.15	34.05	60	18.	29.18	20.82	11.47	2.710	2.83
March	47.90	33.61	40.75	72	21.	38.24	27.32	11.79	4.270	3.72
April	52.60	40.60	46.60	68	32.	51.42	34.53	11.40	6.445	3.26
May	71.53	55.10	63.31	88	43.	62.94	49.54	12.97	3.034	3.53
June	79.70	63.86	71.78	94	52.	73.12	55.16	16.44	4.030	3.91
July	84.54	69.54	77.04	92	64.	75.58	62.77	18.52	4.060	4.29
August	78.85	66.09	72.22	86	60.	72.10	62.	10.1	4.400	4.34
September	72.66	56.93	64.79	86	46.	65.67	53.25	11.96	1.293	3.30
October.	65.83	50.64	58.24	82	36.	53.99	47.42	10.85	2.267	3.30
November	48.70	37.60	43.15	63	29.	42.67	32.70	10.30	6.055	3.53
December	48.	35.74	41.87	64	22.	31.56	32.50	8.63	5.174	3.93
For the year	59.92	47.19	53.55	94	—.2	52.04			45.749	43.76

The mortality of the year 1852 exceeds that of 1851, in proportion of nearly one-eighth. This notable increase in the number of deaths is found chiefly under the heads of consumption, dysentery, smallpox.

I am unable to indicate anything in the condition of the atmosphere likely to cause the increased number of deaths from the three diseases named.

The records of deaths in the city and liberties of Philadelphia, made at the office of the Board of Health, have been arranged in tables, each embracing thirteen weeks or one-quarter of a year. To the table of the fourth quarter is added the aggregate mortality of the preceding quarters and of the entire year.

The total number of deaths for the year 1852, is 10,155, and exclusive of the 500 stillborn, is 9,655, which is in excess of the preceding year of 1,254.

Of the total number, including the stillborn, 2,744 perished under one year of age: 1,113 died between the age of one and two years, and the same number between two and five years of age. Excluding the stillborn, 4,570, or 49.59 per cent. of the whole (9,655), died under the age of five years.

The number of persons who died under the age of twenty years was 5,447; and above that age 4,208. Of the latter number, 176 persons passed the 80th, 39 the 90th, and 7 the 100th year of life.

The aggregate includes 942 from the Almshouse, 116 from the country, and 844 people of color; in all, 1,902.

From the number of deaths stated in the tables, it is proper to exclude the following, in order to ascertain the number of white persons who have died in the city and liberties during the year, from morbific agencies.

Casualties	222
Debility	341
Fracture	8
Old age	189
Unknown	270
Wounds	2
Stillborn	500
Deducting this aggregate of	1,532

from the total mortality 10,155, we have 8,623, the number of deaths from various diseases in the year 1852, or 1,028 more than in the previous year.

The mortality from diseases of the lungs and air-passages, exclusive of hooping-cough, is 2,316, or 23.98 per cent. of the whole number (9,655) of deaths.

The number of deaths from "consumption of the lungs" is 1,182 or 12.18 per cent. of the whole mortality, which is an increase of 1.65 per cent. above the ratio of 1851.

The following table exhibits the number of deaths annually, from disease of the lungs and air-passages, for the year 1850, 51, 52, and for each quarter in the last year.

The cold half of the year, or the first and fourth quarters, show the greatest mortality from diseases of the air-passages.

Mortality from Diseases of the Lungs and Air-passages.

	Annual Aggregates.			Quarters of 1852.			
	1850.	1851.	1852.	First.	Second.	Third.	Fourth.
Abscess, pulmonary	12	15	16	8	2	1	5
Angina, pectoris	...	...	8	3	1	1	3
Asphyxia	17	20	28	7	4	8	9
Asthma	13	11	14	4	3	2	5
Congestion of the lungs	58	68	62	26	18	13	10
Consumption, laryngeal	...	9	3	3	...	...	...
Consumption of the lungs	907	881	1182	357	305	246	274
Croup	148	180	187	57	41	26	63
Disease of the chest	...	2	10	3	1	1	5
Disease of the lungs	32	28	21	6	7	3	5
Dropsy of the chest	68	62	46	12	21	9	4
Effusion on the chest	...	6	10	3	3	1	3
Effusion on the lungs	4	1	4	...	1	2	1
Emphysema	...	3	...	...	...	...	...
Empyema	2	2	1	1	...	...	...
Gangrene of the lungs	...	6	2	...	1	...	1
Hepatization of the lungs	...	1	1	1	...	...	...
Hemorrhage from the lungs	24	29	22	8	5	3	6
Influenza	...	6	8	3	...	...	5
Inflammation of the bronchi	191	175	207	88	56	26	37
" chest	...	...	14	8	1	1	4
" larynx	23	25	21	7	9	1	4
" lungs	352	352	488	195	114	47	82
" pleura	11	9	11	4	3	3	1
" trachea	...	1	...	...	...	...	...
Total	1850	1892	2316	804	591	394	527
Hooping-cough	117	122	16	6	1	4	5
Total	1967	2014	2332	810	592	398	532

The following table, in a like manner, exhibits the—

Mortality from Diseases of the Nervous System.

	Annual Aggregates.			Quarters of 1852.			
	1850.	1851.	1852.	1st.	2d.	3d.	4th.
Abscess of the brain	...	5	8	1	...	1	1
Apoplexy	97	86	91	24	22	18	27
Atrophy of the brain	...	...	2	...	1	...	1
Chorea	...	3	2	2	...	...	...
Catalepsy	...	...	1	...	...	1	...
Compression of the brain	5	6	1	...	1	...	...
Congestion of the brain	97	130	124	25	45	30	24
Consumption of the brain	...	2	1	...	1	...	...
Convulsions	444	479	483	140	125	139	79
Disease of the brain	88	74	99	31	21	26	21
Dropsy of the brain	283	245	236	69	70	59	38
Effusion on the brain	74	78	93	21	26	26	20
Epilepsy	14	28	23	4	7	5	7
Inflammation of the brain	218	202	254	65	68	76	45
Insanity	...	4	1	...	1	...	...
Irritation of the brain or spinal marrow	...	1	...	...	...	...	...
Mania	5	7	11	...	1	6	4
Mania à potu	54	64	52	15	15	7	15
Neuralgia	5	3	2	...	1	...	1
Palsy	71	50	77	29	11	23	14
Softening of the brain	10	28	15	2	1	4	8
Spinal meningitis	...	...	2	...	2	...	...
Spinal ramollissement	...	1	...	...	...	...	...
Teething	23	16	12	...	3	7	2
Tetanus	11	15	7	1	1	2	3
Trismus	...	5	4	...	2	1	1
	1499	1581	1596	429	425	431	311
Puerperal convulsions	...	9	16	6	5	5	...
" mania	...	1	6	...	5	1	...
Totals	...	1541	1618	435	435	437	311
Total mortality, exclusive of stillborn	8025	8401	9655				

The number of deaths from diseases of the nervous system was 1,596, or at the rate of 16.53 per cent. of the total mortality.

The number of deaths from diseases of some of the organs of nutrition was 2,023, or at the rate of 20.95 per cent. of the total mortality. They are stated in the following table.

The number of deaths from dysentery alone, during the year, was 537, or 5.56 per cent. of the whole mortality. This is an increase over preceding years.

The number of deaths from cholera infantum, has decreased from

505 in the year 1851, to 330 in 1852. The deaths from diarrhœa have also decreased from 208 in 1851, to 154 in the year 1852.

The third quarter, or warm season, appears to have been the most unfavorable for diseases affecting the mucous membrane of the alimentary canal. More than one-half of the deaths from these diseases during the year occurred in that period.

Mortality from Diseases of some Organs of Nutrition.

	Annual Aggregates.			Quarters of 1852.			
	1850.	1851.	1852.	1st.	2d.	3d.	4th.
Abscess	14	20	8	2	4	2	...
" abdominal	...	1	1	...	...	...	1
" of the liver	3	3	7	1	1	2	3
Cancer of pylorus	1	1	2	1	1	...	...
" stomach and bowels	24	13	14	4	4	4	2
Cholera	6	...	...	...	...	...	...
" infantum	505	397	330	6	24	287	13
" morbus	24	28	45	1	6	15	23
Cirrhosis of liver	...	8	7	...	1	5	1
Colic	5	7	9	4	3	2	...
Colica pictonum	2	2	...	...	...	...	...
Constipation	...	1	1	...	...	1	...
Consumption of the bowels	...	1	4	...	1	3	...
Diarrhœa	208	157	154	26	20	79	29
Disease of the liver	26	13	21	5	4	5	7
" stomach and bowels	29	19	27	9	5	7	6
Dropsy	116	123	123	27	27	32	37
" abdominal	28	29	41	7	10	12	12
Dysentery	421	401	587	34	55	390	58
Dyspepsia	2	2	3	...	2	...	1
Gout	2	5	3	3	...	...	...
Icterus	17	17	15	2	4	5	4
Ileus	8	3	1	...	1	...	...
Inflammation of the liver	37	34	39	14	9	6	10
" " peritoneum	62	60	70	23	24	10	13
" " stomach and bowels	187	187	233	44	50	85	54
Intussusception	...	...	7	2	3	2	...
Marasmus	217	255	246	82	78	128	58
Obstruction of the bowels	3	3	8	...	3	2	3
Scrofula	57	48	68	10	20	9	29
Tabes mesenterica	25	45	45	6	13	13	13
Tuberculosis	16	18	33	12	5	10	6
Ulceration of stomach and bowels	19	16	21	4	7	7	3
Totals	2064	1917	2023	329	385	1123	386
Total mortality, exclusive of stillborn	8025	8401	9655				

The number of deaths from diseases of the urino-genital organs in the year 1852, was 176, as stated in the following table.

The number of deaths from puerperal fever was 43, and of these,

27 occurred in the first quarter of the year, or in the coldest season.

Mortality from Diseases of the Urino-Genital organs.

	Annual Aggregates.			Quarters of 1852.			
	1850.	1851.	1852.	1st.	2d.	3d.	4th.
Abortion	...	1	1	...	...	1	...
Cancer of mammæ	7	11	11	4	3	4	...
" uterus	18	17	11	5	3	2	1
Childbed	4	7	1	1	...	...	...
Chlorosis	...	...	2	1	1	...	...
Convulsions, puerperal	8	9	16	6	5	5	...
Disease of the bladder	...	1	1	1	...	...	...
" kidneys	9	8	9	1	4	...	4
" ovaries	1	1	...	...	...	...	...
" prostate gland	...	1	1	...	...	1	...
" urinary organs	1	1	2	1	...	1	...
" uterus	...	1	2	...	...	2	...
Dropsy, ovarian	3	2	3	1	2	...	...
Enlargement of prostate	...	1	1	...	...	...	1
Fever, puerperal	30	41	43	27	8	5	3
Hemorrhage from uterus	11	12	10	3	2	4	1
Inflammation of the bladder	2	10	9	4	2	2	1
" " kidneys	6	4	9	2	4	2	1
" " prostate	...	2	...	...	...	...	...
" " uterus	8	16	19	5	6	7	1
Mania, puerperal	...	1	6	...	5	1	...
Menorrhagia	...	...	1	1	...	...	...
Orchitis	...	...	1	...	1	...	...
Rupture of bladder	...	1	...	...	...	...	...
" uterus	2	...	1	1	...	...	...
Stone	...	...	2	...	1	...	1
Stricture of the urethra	...	1	...	...	...	...	...
Strangury	...	...	2	1	...	1	...
Syphilis	...	5	6	2	1	2	1
Tumor, ovarian	...	1	4	2	2	...	...
Ulceration of the bladder	...	2	...	...	...	...	...
" " urethra	...	...	1	...	...	1	...
" " uterus	...	1	1	...	...	1	...
Totals	110	158	176	69	50	42	15

The mortality from fevers is exhibited in the following table. The total number was 861, or at the rate of 8.71 per cent. of the whole mortality. Fevers appear to have been most fatal in the first and in the fourth quarters.

The deaths from scarlatina numbered 419, or 4.33 per cent. of the total mortality.

Mortality from Fevers.

	Annual Aggregates.			Quarters of 1852.			
	1850.	1851.	1852.	1st.	2d.	3d.	4th.
Fever	32	25	30	7	9	7	7
" bilious	15	2	8	1	...	3	4
" catarrhal	3	...	2	...	1	1	...
" cerebral	...	2	4	2	...	...	2
" congestive	17	10	15	4	2	5	4
" continued	3	2	...	...	...	...	...
" gastric	...	1	2	1	1	...	...
" hectic	5	4	6	...	1	4	1
" intermittent	15	7	5	1	1	2	1
" inflammatory	...	...	1	...	1	...	...
" nervous	1	...	2	...	...	...	2
" puerperal	30	41	48	27	8	5	8
" remittent	35	37	36	6	10	12	8
" scarlet	439	400	419	127	93	46	153
" synocha	...	...	3	...	1	1	1
" typhoid	105	127	131	20	40	29	42
" typhus	69	88	154	28	49	31	46
Totals	769	746	861	224	217	146	274

The aggregate of deaths from smallpox, varioloid, and measles, is 528, or 5.50 per cent. of the whole mortality. The number of deaths from smallpox alone, was 426, or at the rate of 4.41 per cent. of the total mortality. This disease has more than doubled in its mortality in the past two years.

	Annual Aggregates.			Quarters of 1852.			
	1850.	1851.	1852.	1st.	2d.	3d.	4th.
Measles	69	16	90	38	42	7	3
Smallpox	40	216	426	258	126	29	13
Varioloid	1	8	11	5	3	3	...
Variolous fever	...	...	1	1	...	...	...
Totals	110	240	528	302	171	39	16

The most fatal diseases which prevailed during the year are stated in the following table.

Causes assigned for Death where the number is 90 and upwards.

	Annual Aggregates.			Quarters of 1852.			
	1850.	1851.	1852.	1st.	2d.	3d.	4th.
Apoplexy	97	...	91	24	22	18	27
Cholera infantum	505	397	330	6	24	287	13
Consumption of the lungs	907	881	1182	357	305	246	274
Congestion of the brain	97	130	124	25	45	30	24
Convulsions	444	479	483	140	125	139	79
Croup	143	180	187	57	41	26	63
Debility	201	260	341	63	64	112	102
Diarrhœa	208	157	154	26	20	79	29
Disease of the brain	...	...	99	31	21	26	21
" heart	101	98	124	38	34	21	31
Dropsy	116	123	128	27	27	32	37
" of the brain	288	245	236	69	70	59	38
Dysentery	421	401	537	34	55	390	58
Effusion on the brain	...	...	93	21	26	26	20
Erysipelas	...	...	91	44	24	13	10
Fever, scarlet	439	400	419	127	93	46	153
" typhoid	105	127	131	20	40	29	42
" typhus	...	...	154	28	49	31	46
Inanition	...	106	91	29	22	26	14
Inflammation of brain	218	202	254	65	68	76	45
" bronchi	191	175	207	88	56	26	37
" lungs	352	352	438	195	114	47	82
" stomach and bowels	187	187	233	44	50	85	54
Marasmus	217	255	346	82	78	128	58
Measles	...	...	90	38	42	7	3
Old age	185	186	189	71	58	30	30
Smallpox	...	216	426	258	126	29	13
Stillborn	453	470	500	141	113	118	128
Unknown	147	141	270	65	77	57	71

TABLE OF

Collated from returns to the Board of Health of Philadelphia,

FIRST QUARTER. (Commencing

	Jan. 3.		Jan. 10.		Jan. 17.		Jan. 24.		Jan. 31.		Feb. 7.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Abscess	...	...	...	...	...	...	...	...	...	...	...	...
" of brain	1	...	...	...	...	...	...	...	...	...	...	...
" liver	...	...	...	...	...	...	...	...	...	...	...	...
" lungs	1	...	...	...	...	1	...	...	1	...	...	...
" psoas	...	...	...	...	...	...	...	...	...	...	...	...
" spleen	...	...	...	...	...	...	...	...	...	...	...	...
" throat	...	...	...	...	...	...	...	...	...	1	...	...
Anæmia	...	1	2	...	...	...	...	...	...	...	...	...
Angina pectoris	...	...	...	...	...	...	1	...	...	...	...	...
Aneurism of the aorta	...	...	...	...	...	...	...	...	...	...	...	...
Anthrax	...	...	...	...	...	...	...	...	...	...	...	...
Apoplexy	2	...	2	...	...	1	1	...	3	...	1	...
Asphyxia	...	1	...	...	1	...	...	...	...	1	1	...
Asthma	...	...	1	...	...	1	...	...	...	...	...	...
" thymicum	...	...	...	...	...	...	...	...	...	...	...	...
Cachexia	...	...	...	...	...	...	...	...	...	...	...	...
Cancer and scirrhus	1	...	...	...	...	...	...	...	...	...	...	...
" of face	...	1	...	...	...	...	...	...	...	...	1	...
" mamma	...	...	...	...	...	...	...	...	...	...	1	...
" pylorus	...	...	...	...	...	...	...	...	...	...	...	...
" stomach and bowels	...	...	...	...	...	...	1	...	1	...	...	...
" pancreas	...	...	...	...	...	...	...	...	...	...	...	...
" uterus	...	...	...	...	1	...	...	...	...	...	...	...
Cancrum oris	...	...	...	...	...	...	...	...	...	...	...	...
Caries of the spine	...	...	...	...	...	...	...	...	...	...	...	...
Casualties	2	...	1	1	3	...	2	2	1	...	...	...
" burns and scalds	...	1	...	1	...	1	...	...	...	...	...	1
" concussion of brain	1	...	...	1	...	...	...	...	...	...	...	...
" drowned	...	...	...	...	...	...	...	...	...	...	...	...
" neglect	...	...	...	...	1	...	...	...	...	...	...	...
" poisoning	...	...	...	...	...	...	...	...	...	...	...	...
" suicide	1	...	...	...	...	...	...	...	...	...	...	...
" violence	...	...	...	...	...	...	1	...	1	...	...	1
Childbed	...	...	...	...	...	...	1	...	...	...	...	...
Chlorosis	1	...	...	...	...	...	...	...	...	...	...	...
Cholera infantum	...	...	...	...	...	...	...	...	...	1	...	...
" morbus	...	...	...	...	...	...	...	...	...	...	...	...
Chorea	...	1	...	...	...	...	...	...	...	1	...	...
Colic	1	...	...	...	...	...	...	...	...	...	...	1
Consumption of lungs	20	5	19	2	27	2	28	5	23	8	30	2
" laryngeal	...	...	...	...	...	...	1	...	...	...	...	...
Congestion	...	...	...	...	...	...	...	...	...	...	...	...
" of the brain	...	1	2	2	1	1	1	1	1	...	2	1
" liver	...	...	...	...	...	...	...	...	...	...	...	1
" lungs	1	4	2	...	1	...	1	1	...	...	1	...
Convulsions	...	15	1	7	...	2	...	11	1	11	...	12
" puerperal	2	...	...	...	1	...	...	...	...	...	1	...
Coryza	...	...	...	...	...	...	...	...	...	...	...	...
Croup	...	1	...	4	...	6	...	7	...	4	...	1

MORTALITY,

for the year 1852, by W. S. W. RUSCHENBERGER, M D.

December 28, 1851.)

Feb. 14.		Feb. 21.		Feb. 28.		Mar. 6.		Mar. 13.		Mar. 20.		Mar. 27.		Total for the first quarter.		
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.	Total.
...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	2	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1
1	...	...	1	...	...	...	1	1	1	...	...	...	...	4	4	8
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3
1	...	1	...	...	...	...	...	...	...	...	...	...	...	3	...	3
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
1	...	2	...	4	...	4	...	1	...	...	...	1	1	22	2	24
...	1	...	1	1	...	...	...	...	...	...	...	...	...	3	4	7
...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	1	3
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1
1	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	2
...	...	...	...	...	...	...	...	1	...	1	...	...	...	3	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	2	...	...	...	1	...	...	...	4	...	4
1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	1	...	1	...	...	...	...	...	4	...	4
...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1
...	...	...	...	1	...	1	...	1	...	...	...	1	...	5	...	5
...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	2	2
1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	2
2	...	1	...	...	...	1	...	1	8	1	...	1	...	16	6	22
...	...	...	...	...	...	...	1	...	1	1	...	...	...	1	6	7
...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	1	3
1	...	...	...	...	...	2	...	...	...	1	...	...	...	4	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	1	...	1	...	...	...	...	...	2	...	2
...	...	...	...	...	...	...	...	...	...	1	...	2	...	4	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	6	6
...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	2	4
21	6	21	4	21	2	20	4	29	8	20	4	82	4	811	46	357
...	...	...	...	2	...	...	...	...	...	...	...	...	...	3	...	3
...	...	1	1	...	...	...	...	...	...	...	...	...	...	1	1	2
...	...	1	1	1	...	2	...	2	2	1	...	2	...	16	9	25
...	...	...	...	...	1	1	1	...	1	...	...	...	...	1	4	5
...	8	8	5	...	2	...	...	1	...	...	...	...	1	10	16	26
1	14	...	6	1	12	2	5	1	12	...	11	...	15	7	133	140
...	...	1	...	...	...	1	...	...	...	...	...	...	...	6	...	6
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
...	11	...	...	...	1	...	5	...	7	...	8	...	7	...	57	57

TOTAL MORTALITY.—

	Jan. 3.		Jan. 10.		Jan. 17.		Jan. 24.		Jan. 31.		Feb. 7.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Cyanosis	...	...	...	...	...	...	...	1	...	3	...	2
Debility	...	4	1	2	2	3	3	7	2	2	3	5
Diarrhœa	...	1	1	3	...	3	1	1	...	1	1	1
Disease of the bladder	...	...	...	...	...	...	...	...	...	...	...	...
" brain	...	2	1	3	...	2	...	...	...	2	1	...
" chest	...	...	...	...	...	...	...	...	...	...	1	1
" heart	1	1	...	...	3	...	2	2	1	4	1	...
" hip	...	...	...	...	...	...	...	...	...	1	...	...
" kidneys	...	...	...	...	...	...	...	...	...	...	...	...
" liver	...	...	1	...	1	...	1	...	...	...	...	...
" lungs	1	...	...	...	...	...	1	...	...	1	...	...
" stomach and bowels	...	...	...	...	1	1	...	...	...	...	...	...
" urinary organs	...	...	...	...	...	...	...	...	1	...	...	...
Dropsy	...	1	1	...	...	2	2	...	1	2	2	...
" abdominal	1	...	...	1	1	...	1	...	...	...	1	...
" brain	...	3	...	6	...	...	...	5	...	7	...	3
" chest	...	...	2	...	...	...	...	...	...	...	...	...
" heart	...	...	...	...	...	...	...	...	...	...	...	...
" ovarian	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery	2	2	2	2	1	1	1	1	...	...	...	1
Effusion on the brain	...	2	...	1	...	3	...	4	...	1	...	...
" chest	...	...	...	...	...	...	...	...	...	...	...	...
" heart	...	...	...	...	...	...	...	...	...	...	...	...
Empyema	...	...	...	...	...	...	...	...	...	...	...	...
Enlargement of the heart	1	...	...	...	1	...	...	...	...	...	...	...
Epilepsy	...	...	...	...	...	...	...	...	2	...	...	...
Erysipelas	1	3	1	1	1	...	1	1	...	1	2	2
Fever	...	...	1	...	...	...	...	...	...	...	...	...
" bilious	...	...	...	...	...	...	...	...	...	...	...	...
" cerebral	...	...	...	1	...	...	...	...	...	...	...	1
" congestive	1	...	...	...	...	...	...	...	...	...	...	...
" gastric	...	...	...	...	...	...	...	...	...	...	...	...
" intermittent	...	...	...	...	...	...	...	...	...	...	...	...
" puerperal	3	...	2	...	2	...	4	...	1	...	3	1
" remittent	...	...	1	...	...	...	...	...	...	...	...	...
" scarlet	...	12	...	6	...	6	...	10	...	6	1	11
" typhoid	1	...	2	...	...	1	2	...	1	1	...	...
" typhus	2	...	...	...	1	...	4	...	2	...	4	1
" variolous	...	...	...	...	...	...	...	...	...	...	...	...
Fracture of the leg	...	...	...	...	...	...	...	...	1	...	...	...
" skull	...	...	...	...	...	...	...	...	...	...	...	...
Gangrene	...	...	1	1	...	...	1	...	...	...	...	...
Gout	...	...	...	...	...	...	...	...	...	...	...	...
Hemorrhage	...	1	1	...	...	...	...	1	...	...	1	1
" from the lungs	...	...	...	...	...	...	...	...	...	1	...	...
" stomach and bowels	...	...	...	...	1	...	...	...	...	...	...	...
" uterus	...	...	...	...	...	...	1	...	...	...	...	...
Hepatization of the lungs	1	...	...	...	...	...	...	...	...	...	...	...
Hernia	1	...	...	...	...	...	...	...	...	...	...	...
Icterus	...	...	...	...	...	...	...	...	...	...	...	...
Inanition	...	1	...	1	...	1	...	1	...	4	...	2
Inflammation	...	...	...	...	...	...	...	...	...	...	...	1
" of the bladder	...	...	...	...	1	...	1	...	1	...	...	...

1ST QUARTER—*Continued.*

Feb. 14.		Feb. 21.		Feb. 28.		Mar. 6.		Mar. 13.		Mar. 20.		Mar. 27.		Total for the first quarter.		
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.	Total.
...	...	...	...	...	1	...	...	...	1	...	...	...	1	...	9	9
1	2	...	4	2	8	1	3	2	4	1	2	2	2	20	48	68
...	...	1	6	1	...	2	...	1	...	1	...	1	...	10	16	26
...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1
1	4	...	1	...	5	...	4	1	...	...	1	...	3	4	27	31
...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	2	3
3	...	3	...	3	...	2	1	2	...	3	1	5	...	29	9	38
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
...	...	...	...	...	1	1	...	...	...	...	...	...	...	4	1	5
...	1	...	...	...	...	...	...	1	...	1	...	...	...	4	2	6
2	...	...	...	...	...	1	1	1	...	...	...	1	1	6	3	9
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
3	...	2	...	1	...	2	3	...	2	...	...	2	1	16	11	27
...	...	...	...	...	...	...	...	...	...	...	...	2	...	6	1	7
...	5	...	9	...	12	...	8	...	8	...	5	...	4	...	69	69
1	1	...	1	1	...	3	...	1	...	2	...	...	...	10	2	12
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
...	1	2	4	3	2	1	2	1	2	...	1	1	1	14	20	34
...	2	...	1	1	1	...	1	...	...	...	1	...	3	1	20	21
...	...	1	...	...	1	...	...	...	...	...	...	1	...	2	1	3
...	...	...	1	...	...	...	...	...	...	1	...	...	...	1	1	2
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
...	...	1	...	...	...	...	...	1	...	1	...	4	1	9	1	10
...	...	1	...	...	...	...	1	...	...	...	...	...	...	3	1	4
2	...	4	...	1	1	1	5	4	2	2	6	1	27	17	44
...	1	...	...	...	1	...	1	...	1	1	...	...	1	2	5	7
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	1	...	...	2	...	...	...	...	...	...	...	...	...	3	1	4
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
1	...	3	...	1	1	1	...	1	...	2	...	1	...	25	2	27
...	...	2	...	...	2	...	...	...	...	1	...	...	...	6	...	6
1	7	...	15	...	17	...	12	...	11	1	7	...	4	3	124	127
1	2	1	2	2	1	1	...	1	...	1	...	...	...	18	7	20
4	...	2	1	3	...	...	1	1	...	...	...	1	1	24	4	28
...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
...	1	1	...	1	...	...	...	...	...	...	...	1	...	5	2	7
...	...	1	...	...	...	1	...	...	...	...	...	1	...	3	...	3
...	...	...	...	3	1	1	1	...	1	1	...	...	...	7	6	13
1	...	...	...	1	1	1	...	1	...	1	...	1	...	6	2	8
...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	2
...	...	...	...	2	...	...	...	...	...	...	...	...	...	3	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	1	1	...	...	...	...	...	...	...	1	...	...	...	3	1	4
...	...	...	...	...	...	...	1	...	...	...	...	...	1	2	...	2
...	1	...	3	1	1	...	2	...	3	...	2	1	5	2	27	29
...	...	1	...	...	...	1	...	...	...	...	...	...	...	2	1	3
...	...	...	...	...	...	1	...	...	...	...	...	...	...	4	...	4

TABLE OF MORTALITY.—

	Jan. 3.		Jan. 10.		Jan. 17.		Jan. 24.		Jan. 31.		Feb. 7.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Inflammation of the brain	1	3	1	3	...	...	...	5	1	5	2	3
" bronchi	2	3	1	7	2	6	1	6	1	8	1	4
" chest	1	...	...	...	...	1	...	...	1	1	...	...
" heart	...	...	...	...	1	...	...	...	...	...	1	...
" kidneys	...	1	...	...	...	...	...	1	...	...	...	...
" larynx	...	...	...	...	...	...	...	1	...	...	1	...
" liver	1	...	1	...	...	1	2	1	...	...	...	...
" lungs	7	10	6	5	8	11	5	9	2	19	3	8
" parotids	...	...	...	...	...	...	...	...	...	...	...	...
" peritoneum	3	...	...	...	2	1	4	...	2	...	...	...
" pleura	...	...	...	...	1	...	...	...	...	...	1	...
" stomach and bowels	3	2	...	2	2	2	3	2	3	2	2	2
" throat	...	...	...	...	...	3	...	...	...	...	...	...
" uterus	...	...	...	...	1	...	2	...	...	...	...	...
Influenza	...	...	...	...	2	1	...	...	...	...	...	...
Intemperance	2	...	...	...	1	...	...	...	...	...	3	...
Intussusception	...	...	...	1	...	1	...	...	...	...	...	...
Irritation of the spine	...	...	...	...	...	...	...	...	...	...	...	...
Malformation	...	1	...	...	...	...	...	2	...	1	...	...
" of the heart	...	1	...	...	...	...	...	...	...	...	...	...
" spine	...	...	...	...	...	...	...	...	...	...	...	1
Mania à potu	...	...	1	...	1	...	...	...	2	...	...	...
Marasmus	...	6	3	6	...	5	...	7	...	1	2	1
Measles	...	...	...	1	...	1	1	2	...	5	...	4
Menorrhagia	...	...	...	...	...	...	...	...	...	...	...	...
Old age	4	...	12	...	3	...	10	...	7	...	5	...
Palsy	...	...	4	...	5	1	1	...	1	...	...	...
Perforation of the stomach or bowels	...	...	...	...	...	...	...	...	...	...	...	...
Phlebitis	...	...	...	...	...	...	...	...	...	...	...	...
Phlegmasia dolens	...	...	...	...	...	...	...	...	...	...	...	...
Purpura	...	...	...	...	...	...	...	...	...	1	...	...
Rheumatism	1	...	...	...	...	2	...	...	...	1	...	...
Rupture of uterus	...	...	...	...	...	...	...	...	...	...	...	...
Scrofula	...	1	...	...	...	...	1	...	...	2	...	...
Smallpox	4	19	8	16	4	18	5	14	6	15	6	18
Softening of brain	...	...	...	...	...	...	...	...	...	...	1	...
Spasm of epiglottis	...	1	...	...	...	...	...	...	...	...	...	...
Spina bifida	...	...	...	...	...	1	...	...	...	...	...	...
Stillborn	...	18	...	14	...	8	...	5	...	11	...	9
Strangury	...	...	...	...	...	...	...	...	...	...	...	...
Suffocation	...	...	1	...	1	...	...	...	...	...	...	1
Syphilis	...	...	...	...	...	...	...	...	...	...	...	...
Tabes mesenterica	...	...	...	...	...	...	...	...	...	...	...	2
Tetanus	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis	...	...	...	...	1	1	1	...	...	...	...	...
Tumor, ovarian	...	...	...	...	...	...	...	...	...	...	...	...
Tympanitis	...	...	...	...	...	...	...	...	...	...	...	...
Ulcer	...	...	...	...	...	...	1	...	...	...	...	...
" of the face	...	...	...	...	...	...	...	...	...	...	...	...
" larynx	...	...	...	...	...	...	...	...	...	...	...	1
" neck	...	...	...	...	...	...	...	...	...	...	...	...
" stomach and bowels	...	...	1	...	...	...	1	...	...	...	...	1
" throat	...	...	...	...	...	1	...	...	...	...	...	...

1ST QUARTER—*Continued.*

Feb. 14.		Feb. 21.		Feb. 28.		Mar. 6.		Mar. 13.		Mar. 20.		Mar. 27.		Total for the first quarter.		
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.	Total.
1	5	1	4	1	6	2	3	...	5	1	6	...	6	11	54	65
...	3	...	3	3	6	1	6	2	8	1	1	3	9	18	70	88
...	...	...	...	...	1	...	...	...	2	...	...	...	1	2	6	8
1	...	...	1	...	...	...	...	...	...	1	2	...	...	4	3	7
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	...	1	...	...	...	...	1	1	...	1	1	...	...	4	3	7
...	...	1	...	1	...	2	...	...	...	1	1	2	...	11	3	14
7	8	8	13	5	5	4	11	7	10	5	7	5	7	72	123	195
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1
2	...	1	...	1	...	1	...	1	...	3	...	2	...	22	1	23
...	...	...	1	...	...	...	...	...	...	...	...	1	...	3	1	4
1	1	...	4	...	2	...	1	1	3	1	4	1	...	17	27	44
1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	4
...	...	...	...	...	...	...	...	...	...	1	...	1	...	5	...	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3
...	...	3	...	...	...	...	...	4	...	1	...	...	...	14	...	14
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	1	...	...	...	...	...	2	...	...	...	1	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	7
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	2	...	1	...	2	...	3	...	2	...	1	...	15	...	15
...	3	1	7	1	7	1	3	1	5	1	5	...	11	10	72	82
...	1	...	2	...	2	...	5	...	7	...	4	...	3	1	37	38
...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1
1	...	8	...	4	...	1	...	4	...	5	...	5	...	71	...	71
4	...	6	...	2	...	1	...	3	...	2	...	4	...	29	...	29
1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	2
1	...	...	...	...	...	...	...	1	...	...	...	1	...	3	...	3
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	4
...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1
...	...	...	1	...	1	...	...	...	...	...	1	2	1	3	7	10
9	10	5	15	5	13	5	7	6	19	4	8	5	14	72	186	258
...	...	...	...	...	...	1	...	...	...	...	...	...	...	2	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	2
...	10	...	14	...	7	...	10	...	12	...	8	...	20	...	141	141
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	2	4
1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	1	2
...	2	...	...	...	...	...	...	...	2	...	...	...	...	...	6	6
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
...	...	...	...	...	...	...	8	...	...	...	8	...	8	2	10	12
...	...	...	...	...	...	...	...	2	...	...	...	...	...	2	...	2
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
...	...	...	...	...	...	1	1	...	...	...	...	...	...	2	1	3
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	1	...	...	...	...	2	2	4
...	...	...	...	...	...	1	...	...	...	...	...	1	1	2	2	4

TABLE OF MORTALITY.—

	Jan. 3.		Jan. 10.		Jan. 17.		Jan. 24.		Jan. 31.		Feb. 7.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Unknown	2	8	...	2	1	4	4	1	3	3	...	1
Varioloid	...	1	...	1	...	...	...	...	...	1	...	2
Whooping-cough	...	1	...	...	...	...	...	...	...	2	...	1
Worms	...	...	...	...	...	...	...	...	...	...	...	...
From the almshouse	17		17		17		20		18		27	
From the country	1		1		2		...		2		1	
People of color	24		10		14		21		21		20	
Under 1 year	...	67	...	49	...	52	...	58	...	65	...	49
From 1 to 2 years	...	19	...	15	...	23	...	18	...	23	...	23
" 2 " 5 "	...	27	...	18	...	20	...	25	...	25	...	17
" 5 " 10 "	...	13	...	14	...	8	...	11	...	9	...	9
" 10 " 15 "	...	2	...	3	...	2	...	...	...	2	...	4
" 15 " 20 "	...	2	...	6	...	7	...	5	...	13	...	10
" 20 " 30 "	18	...	18	...	28	...	34	...	21	...	23	...
" 30 " 40 "	14	...	12	...	17	...	26	...	8	...	23	...
" 40 " 50 "	17	...	15	...	16	...	12	...	16	...	14	...
" 50 " 60 "	10	...	12	...	12	...	12	...	9	...	8	...
" 60 " 70 "	12	...	8	...	12	...	6	...	6	...	10	...
" 70 " 80 "	8	...	12	...	5	...	7	...	7	...	5	...
" 80 " 90 "	5	...	10	...	2	...	7	...	5	...	4	...
" 90 " 100 "	...	...	1	...	1	...	2	...	...	...	...	...
" 100 and upwards	...	...	...	...	...	...	...	...	2	...	...	...
Totals	84	180	88	105	88	112	106	117	74	137	87	112
Weekly mortality	214		193		200		223		211		199	

FIRST QUARTER—*Continued.*

Feb. 14.		Feb. 21.		Feb. 28.		Mar. 6.		Mar. 13.		Mar. 20.		Mar. 27.		Total for the first quarter.		
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.	Total.
5	6	4	5	1	...	2	2	8	6	2	8	...	2	27	38	65
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	5
...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	6	6
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1
20		23		18		19		17		19		30		262		
2		2		2		4		2		1		4		24		
25		20		14		16		30		19		28		257		
...	49	...	70	...	48	...	52	...	70	...	49	...	74		756	
...	22	...	18	...	29	...	20	...	26	...	19	...	20		275	
...	25	...	34	...	24	...	32	...	32	...	14	...	23		316	
...	12	...	18	...	76	...	7	...	10	...	7	...	12		201	
...	2	...	4	...	1	...	2	...	1	...	4	...	3		30	
...	9	...	9	...	2	...	6	...	1	...	7	...	4		81	1659
28	...	26	...	17	...	23	—	28	...	21	...	28	...	308		
18	...	15	...	18	...	20	...	19	...	17	...	34	...	241		
16	...	16	...	18	...	12	...	21	...	8	...	11	...	187		
13	...	14	...	16	...	17	...	13	...	13	...	14	...	163		
3	...	13	...	6	...	6	...	11	...	11	...	8	...	112		
8	...	9	...	7	...	7	...	8	...	12	...	11	...	106		
2	...	6	...	7	...	3	...	1	...	3	...	4	...	59		
...	...	1	...	1	...	...	...	...	...	1	...	5	...	12		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2		1190
88	119	100	148	85	180	88	119	101	144	86	100	115	136	1190	1659	2849
207		248		265		207		245		186		251				

TABLE OF

Collated from returns to the Board of Health of Philadelphia,

SECOND QUARTER. (Commencing

	April 3.		April 10.		April 17.		April 24.		May 1.		May 8.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Abscess	...	...	...	1	...	...	1	...	1	1	...	...
" of the liver	...	...	...	...	...	...	...	...	...	...	...	...
" lungs	...	...	...	...	1	...	...	...	...	...	...	...
" neck	...	...	...	...	...	...	...	...	...	...	...	...
" thymic	...	...	...	1	...	...	...	...	...	...	...	...
Albuminuria	...	...	...	...	...	...	...	...	...	...	...	...
Anæmia	...	...	...	...	...	...	...	...	...	1	...	...
Angina pectoris	...	...	...	...	...	...	...	...	...	...	1	...
Anuria	...	...	...	...	...	...	...	...	...	...	...	...
Apoplexy	2	...	2	...	1	...	1	...	3	...	1	...
Aphthæ	...	...	...	...	...	...	...	...	...	...	...	...
Asphyxia	...	...	...	...	...	1	...	1	...	...	...	1
Asthma	...	...	...	...	...	...	...	...	1	...	...	...
Atrophy of the brain	...	...	...	...	...	...	...	1	...	...	...	...
Cachexia	...	2	...	...	...	...	...	...	...	...	...	1
Cancer and scirrhus	...	...	...	...	...	...	1	...	...	...	1	...
" of the mammæ	...	...	...	...	...	...	...	...	...	...	...	...
" pylorus	...	...	...	...	...	...	...	...	...	...	...	...
" stomach and bowels	...	...	...	...	...	...	...	...	1	...	...	...
" liver	...	...	...	...	...	...	...	...	...	...	...	...
" pancreas	...	...	...	...	...	...	...	...	...	...	...	...
" rectum	...	...	...	...	...	...	...	...	...	...	...	...
" uterus	1	...	...	...	...	...	...	...	...	...	...	...
Cancrum oris	...	...	...	...	...	...	...	...	...	...	...	...
Caries	...	...	...	...	...	...	...	...	...	...	...	...
" of the spine	...	...	...	...	...	...	...	...	...	...	1	...
Casualties	...	...	...	1	...	...	1	...	...	...	...	1
" burns and scalds	...	...	...	...	...	...	...	...	...	...	...	...
" concussion of the brain	...	...	...	...	...	...	...	...	...	...	...	...
" drowned	...	...	1	...	2	...	2	...	1	...	2	...
" gunshot wounds	...	...	...	...	...	...	...	...	...	...	1	...
" injury of the head	...	...	...	...	...	...	...	...	...	...	1	...
" perineum	1	...	...	...	...	...	...	...	...	...	...	...
" neglect and exposure	...	...	...	...	...	...	1	...	...	...	...	...
" suicide	...	...	...	...	2	...	...	...	...	...	...	...
Chlorosis	...	...	...	...	...	...	...	...	...	1	...	...
Cholera infantum	...	...	...	...	...	1	...	...	...	...	...	2
" morbus	...	1	...	...	...	...	...	...	...	...	...	...
Cirrhosis of the liver	...	...	...	...	...	...	1	...	...	...	...	...
Colic	...	...	...	...	...	...	1	...	...	1	...	...
Coma	...	...	...	...	...	1	...	...	...	...	...	...
Compression of the brain	...	...	...	...	...	...	...	...	...	...	...	...
Consumption of the brain	...	...	...	...	...	...	...	...	...	...	...	...
" bowels	...	...	...	...	...	...	...	...	...	...	...	...
" lungs	24	3	18	4	28	4	20	4	21	5	17	5
Congestion	...	...	...	...	...	...	...	...	...	...	...	1
" of the brain	...	1	2	2	4	2	8	2	1	1	...	2
" liver	...	...	...	...	...	1	...	...	...	...	...	...
" lungs	...	2	...	1	...	1	...	...	1	2	...	...
Convulsions	...	12	...	10	...	11	...	13	1	6	...	5

MORTALITY,

for the year 1852, by W. S. W. RUSCHENBERGER, M. D.
March 28, 1852.)

May 15.		May 22.		May 29.		June 5.		June 12.		June 19.		June 26.		Total for the second quarter.		
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.	Total.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	4
...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	2
...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1
...	...	8	...	1	...	2	...	1	...	2	1	2	...	21	1	22
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	4	4
...	1	...	...	1	...	...	...	...	...	...	...	...	...	2	1	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
1	1	1	...	...	...	...	...	...	...	...	...	...	...	2	4	6
...	...	...	...	...	...	...	...	1	...	1	...	...	...	4	...	4
...	...	1	...	...	...	...	...	...	...	1	...	1	...	3	...	3
...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1
2	...	...	...	...	...	...	...	1	...	...	...	...	...	4	...	4
...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	1	...	...	...	...	1	...	...	...	1	1	2
...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1
1	...	1	...	...	...	...	...	...	...	...	...	...	...	3	...	3
...	...	...	1	...	...	...	...	...	1	...	2	...	2	...	6	6
...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	8	...	1	1	...	1	...	1	...	1	1	3	...	8	7	15
...	1	...	1	...	...	...	...	...	...	...	2	...	1	...	5	5
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1
...	...	8	1	...	1	1	...	3	2	1	...	5	1	21	5	26
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	1	...	1	...	3	...	3	...	3	...	10	...	24	24
...	...	1	1	...	...	1	...	...	...	...	1	1	...	3	3	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	2	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
18	3	23	3	25	8	16	7	11	3	16	2	13	4	250	55	305
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
1	3	1	2	3	2	3	3	1	...	2	1	1	2	22	23	45
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	4	...	1	...	...	...	...	...	1	1	13	13
...	9	...	11	...	7	2	7	1	7	1	10	...	12	5	120	125

TABLE OF MORTALITY.—

	April 3.		April 10.		April 17.		April 24		May 1.		May 8.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Convulsions, puerperal	...	...	...	1	1	...	1	...	...	...	...	...
Cramp	...	1	...	...	...	5	...	...	...	...	...	...
Croup	...	1	...	8	...	...	...	5	...	4	...	4
Coup de soleil	...	...	...	...	...	...	...	...	...	...	...	...
Cyanosis	...	2	...	2	...	1	...	...	...	...	...	1
Debility	8	8	8	7	2	1	...	4	5	1	8	8
Diabetes	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	...	...	8	1	...	1	...	2	...	1	1	1
Disease of the brain	...	8	...	...	...	1	...	2	...	1	...	5
" chest	1	...	...	...	...	...	...	...	...	...	...	...
" elbow	...	...	...	...	...	...	...	...	...	...	...	...
" heart	1	1	8	...	8	2	1	1	4	...	2	2
" kidneys	1	1	...	...	...	...	...	...	...	...	...	1
" knee	...	...	...	...	1	...	...	...	...	...	...	...
" liver	...	...	1	...	1	...	...	...	...	...	...	...
" lungs	...	...	...	1	1	1	...	...	...	...	1	...
" spine	...	...	...	...	...	...	...	...	...	...	...	1
" spleen	...	...	...	1	...	...	...	...	...	...	...	...
" stomach and bowels	...	...	1	...	...	...	...	...	1	...	1	...
" throat	...	...	...	...	...	...	...	...	...	...	...	...
Dropsy	8	8	8	1	1	...	...	...	1	...	...	2
" abdominal	...	...	...	...	1	...	1	...	1	...	1	...
" of the brain	...	10	...	8	...	9	...	9	...	2	...	8
" chest	1	1	8	...	1	2	...	...	...	2	...	1
" heart	1	...	1	...	...	1	...	...	...	...	...	...
" ovarian	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery	...	2	1	4	1	1	4	3	1	...	2	...
Dyspepsia	...	...	...	...	...	...	...	...	...	...	...	..
Effusion on the brain	...	2	2	1	1	1	1	...	1	...	2	1
" chest	2	...	...	...	...	...	...	...	...	...	...	...
" lungs	...	...	...	...	...	...	...	...	...	...	...	...
Enlargement of heart	...	...	...	...	1	1	...	...	...	...	...	...
" liver	1	...	...	...	...	...	...	...	...	...	...	...
" spleen	...	...	...	...	...	...	...	...	...	...	...	...
Epilepsy	...	1	...	...	1	...	...	...	...	...	...	...
Erysipelas	8	...	2	8	1	1	...	...	1	1	1	...
Fever	1	...	...	...	...	...	...	1	...	...	...	1
" catarrhal	...	...	1	...	...	...	...	...	...	...	...	...
" congestive	...	...	...	...	...	1	...	...	...	...	...	...
" gastric	...	...	...	...	...	...	...	...	...	...	1	...
" hectic	...	1	...	...	...	...	...	...	...	...	...	...
" intermittent	...	...	...	...	1	...	...	...	...	...	...	...
" inflammatory	...	...	...	...	...	...	...	...	...	...	...	...
" puerperal	1	...	1	...	2	...	1	...	...	...	2	...
" remittent	...	1	1	2	1	...	...	...	1	...	...	...
" scarlet	...	9	1	1	...	10	1	8	...	5	...	9
" synocha	...	...	...	...	...	...	...	...	...	...	...	...
" typhoid	8	1	1	...	2	1	5	1	4	...	2	1
" typhus	8	1	2	...	5	1	1	...	5	2	7	...
Fracture of the leg	...	...	...	...	...	...	...	...	...	...	...	...
" pelvis	...	...	...	...	...	...	...	...	...	...	...	...
" skull	...	...	...	...	...	...	1	...	...	...	...	...
Gangrene	...	...	...	...	...	...	1	...	...	1	...	...

2D QUARTER—*Continued.*

May 15.		May 22.		May 29.		June 5.		June 12.		June 19.		June 26.		Total for the second quarter.		
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.	Total.
...	...	1	...	...	...	...	...	...	...	...	...	...	1	3	2	5
...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	6	7
...	3	...	4	...	1	...	4	...	5	...	4	...	3	...	41	41
...	...	...	...	...	...	...	...	...	...	3	...	...	...	3	...	3
...	...	...	1	...	...	...	...	...	...	...	1	...	1	...	9	9
4	2	2	2	2	2	2	2	1	1	2	...	1	6	30	34	64
...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1
1	...	1	1	...	2	...	2	...	...	1	1	...	1	7	13	20
...	1	1	1	...	1	1	1	...	...	1	1	...	1	3	18	21
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1
1	1	...	...	...	...	3	...	1	...	5	1	3	...	27	7	34
...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	2	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	2	...	...	...	...	...	...	...	...	...	...	...	4	...	4
1	...	1	...	...	...	...	...	...	1	...	...	...	...	4	3	7
...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
1	...	...	...	...	...	...	...	...	...	1	...	...	...	5	...	5
...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	1	...	...	4	1	2	1	2	1	2	...	...	...	8	9	27
...	...	...	...	1	...	1	...	2	...	1	...	1	...	10	...	10
...	4	...	...	1	7	...	3	...	5	...	3	...	6	1	69	70
1	2	...	...	3	...	...	1	...	1	...	2	...	...	9	12	21
1	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	4
...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	1	2
1	2	3	3	1	2	...	...	...	5	4	7	4	5	22	33	55
...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	1	2
...	...	...	1	...	...	1	2	...	1	...	4	...	5	8	18	26
...	...	...	...	...	...	...	...	...	...	...	...	1	...	3	...	3
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
...	...	1	...	1	...	1	...	1	...	...	...	1	...	6	1	7
2	2	...	2	2	...	...	1	...	...	2	...	...	...	14	10	24
1	...	1	1	1	...	1	...	...	...	1	...	...	...	6	3	9
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	1	...	8	...	8
...	...	...	1	...	...	2	...	...	1	...	...	...	...	5	5	10
...	8	...	12	...	4	...	7	...	8	...	7	...	3	2	91	93
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1
2	...	4	2	2	1	3	...	1	...	4	...	...	...	33	7	40
8	...	...	...	1	...	1	...	3	1	2	...	6	...	44	5	49
...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	1	...	...	...	1	...	...	1	...	...	1	1	4	3	7

TABLE OF MORTALITY.—

	April 3.		April 10.		April 17.		April 24.		May 1.		May 8.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Gangrene of the lungs	...	...	...	...	...	...	...	...	...	...	...	...
Hemorrhage	...	...	...	...	1	1	...	...	...	...	...	...
" of the lungs	...	...	1	...	1	...	...	...	...	...	...	1
" stomach and bowels	...	...	1	...	...	...	...	...	...	1	...	...
" from the umbilicus	...	...	...	...	...	...	...	...	...	...	...	...
" " uterus	1	...	1	...	...	...	...	...	...	...	...	...
Hernia	...	...	...	...	1	...	...	...	1	...	...	...
Icterus	...	...	1	...	...	...	...	...	1	1	...	...
Ileus	...	...	...	...	...	...	...	...	...	...	...	...
Inanition	...	1	...	2	...	...	...	...	...	1	...	3
Inflammation	...	...	...	...	...	...	...	...	...	...	...	2
" of the bladder	...	...	...	...	...	...	...	...	...	...	...	...
" brain	...	1	1	7	...	4	...	5	1	5	1	3
" bronchi	...	2	1	3	...	4	1	6	3	3	1	7
" chest	...	...	...	...	...	...	...	...	...	...	...	1
" heart	...	...	...	1	...	...	1	...	1	...	...	...
" kidneys	...	...	...	...	...	...	...	...	2	...	1	...
" larynx	1	...	...	...	...	...	...	1	1	1	...	1
" liver	3	...	...	...	2	1	...	...	...	...	1	...
" lungs	4	9	7	5	6	3	3	7	6	9	7	2
" peritoneum	3	...	...	...	...	2	1	...	1	...	1	1
" pleura	...	...	1	...	...	...	...	1	...	...	...	...
" stomach and bowels	4	1	2	1	2	1	2	2	1	1	6	1
" tonsils	...	...	...	...	...	...	...	...	...	...	...	...
" throat	...	1	...	...	...	...	...	...	...	...	...	...
" uterus	...	...	1	...	2	...	...	...	1	...	...	...
Insanity	...	...	...	...	...	...	...	...	1	...	...	...
Intemperance	...	...	...	...	1	...	1	...	...	...	...	...
Intussusception	...	1	...	...	...	...	...	...	...	...	...	...
Malformation	...	...	...	...	...	...	...	...	...	1	...	...
" of the heart	...	...	...	...	...	...	...	...	...	1	...	...
" rectum	...	...	...	...	...	...	...	...	...	...	...	...
Mania	...	...	...	...	...	...	...	...	...	...	...	...
Mania à potu	3	...	...	...	2	...	2	...	2	...	2	...
Mania, puerperal	...	...	...	...	...	...	...	...	...	...	1	...
Marasmus	2	3	...	3	1	4	1	7	1	1	...	...
Measles	...	4	...	4	...	5	...	4	..	4	...	5
Melæna	...	...	1	...	1	...	...	...	...	...	...	...
Neuralgia	...	...	1	...	...	...	...	...	...	...	...	...
Obstruction of the bowels	...	...	...	...	...	...	...	1	...	...	...	...
Old age	1	...	5	...	3	...	7	...	9	...	1	...
Ossification of the arteries	1	...	...	...	...	...	...	...	...	...	...	...
" heart	...	...	...	...	...	...	...	...	...	...	...	...
Palsy	1	...	1	...	...	...	...	...	2	...	4	...
Perforation of stomach or bowels	...	...	...	1	...	...	...	...	...	...	...	...
Phlebitis	...	1	...	...	...	...	...	...	...	...	...	...
Purpura	...	...	...	...	...	...	...	...	...	...	...	2
Rheumatism	...	...	...	...	...	...	...	...	1	...	...	1
Scorbutus	...	...	...	...	...	...	...	...	...	...	...	...
Scrofula	2	2	...	1	...	1	...	1	...	2	1	1
Smallpox	2	10	4	13	3	15	4	7	4	9	2	10
Softening of the brain	...	...	...	...	...	...	...	...	...	...	1	...
" " stomach	...	...	...	...	...	...	...	...	...	2	...	...

2D QUARTER—*Continued.*

May 15.		May 22.		May 29.		June 5.		June 12.		June 19.		June 26.		Total for the second quarter.		
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.	Total.
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
1	...	...	...	...	...	...	...	1	...	...	...	...	...	4	1	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
...	...	...	...	1	...	...	...	...	...	...	...	...	...	3	...	3
...	...	...	...	...	1	...	...	...	...	...	...	...	...	2	2	4
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	2	...	2	...	3	...	2	...	...	1	2	...	3	1	21	22
...	...	...	...	1	1	...	...	1	...	...	...	...	...	2	3	5
1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	1	2
1	6	1	5	1	5	...	3	...	4	...	7	2	6	8	60	68
1	5	1	2	1	4	1	1	1	3	...	3	...	2	11	45	56
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	1	1	1	...	...	...	...	1	...	...	1	...	5	3	8
...	...	...	...	...	...	1	...	...	...	...	...	...	...	4	...	4
...	2	...	...	...	...	...	1	1	...	...	...	...	...	3	6	9
...	...	...	...	...	...	...	2	...	...	...	...	...	...	6	3	9
4	8	6	5	1	4	...	4	...	4	...	4	5	1	49	65	114
1	...	3	1	1	...	...	...	1	1	4	1	1	1	17	7	24
...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	1	3
2	2	4	...	4	4	...	1	2	3	1	1	1	1	31	19	50
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	...	1	...	...	...	1	...	...	...	...	...	...	...	6	...	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	1	...	...	...	...	...	2	...	5	...	5
...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	3	3
...	2	...	...	...	1	...	...	...	...	...	1	...	...	...	5	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
2	...	1	...	1	...	...	...	...	...	...	...	...	...	15	...	15
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	6	...	5	...	8	1	7	2	6	1	5	...	9	9	69	78
...	1	...	1	...	5	...	...	...	3	...	5	...	1	...	42	42
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	1	...	1	...	...	...	...	...	...	...	2	1	3
6	...	5	...	6	...	3	...	2	...	6	...	4	...	58	...	58
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
...	...	1	...	...	...	...	...	...	...	1	...	1	...	11	...	11
...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	1	1	...	...	...	1	...	...	...	...	...	1	...	4	2	6
...	...	...	...	1	...	...	...	1	...	...	...	...	...	2	...	2
...	1	...	1	...	1	...	3	...	1	...	1	...	1	3	17	20
2	6	4	11	3	2	...	...	3	2	...	6	2	2	33	93	126
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2

TABLE OF MORTALITY.—

	April 3.		April 10.		April 17.		April 24.		May 1.		May 8.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Spasm of epiglottis	...	...	...	...	...	...	...	1	...	...	...	...
Spinal meningitis	...	...	...	...	...	1	...	...	...	...	...	...
Stillborn	...	16	...	11	...	10	...	7	...	8	...	8
Stone	...	...	...	...	...	...	...	...	...	...	...	...
Suffocation	...	...	...	1	...	1	...	...	...	...	...	...
Syphilis	...	...	...	...	...	...	...	...	...	...	...	...
Tabes mesenterica	...	...	...	1	...	2	...	1	...	8	...	...
Teething	...	...	...	...	...	...	...	...	...	...	...	...
Tetanus	...	...	...	...	...	...	...	...	...	...	...	...
Trismus	...	...	...	...	...	...	...	...	...	...	...	1
Tuberculosis	...	...	...	...	...	1	...	...	...	...	...	...
Tumor	...	...	...	...	...	...	...	...	...	...	...	...
" ovarian	...	...	...	...	...	...	...	...	1	...	...	...
Ulcer	...	...	...	...	...	...	...	...	...	...	1	...
" of the stomach and bowels	...	...	1	...	1	...	...	...	...	...	1	...
" throat	...	...	...	...	...	...	...	...	...	1	...	...
Unknown	8	8	1	8	8	1	2	4	2	1	2	4
Varioloid	...	...	...	...	...	2	...	...	...	...	...	1
Whooping-cough	...	...	...	...	...	...	...	...	...	...	...	...
Wounds	1	...	...	...	...	...	...	...	...	...	...	...
From the almshouse	14		17		28		18		22		21	
From the country	4		2		2		3		3		5	
People of color	15		17		19		19		15		19	
Under 1 year	...	60	...	55	...	51	...	53	...	43	...	47
From 1 to 2 years	...	20	...	24	...	21	...	20	...	18	...	17
" 2 " 5 "	...	19	...	14	...	25	...	21	...	23	...	19
" 5 " 10 "	...	14	...	7	...	14	...	13	...	4	...	16
" 10 " 15 "	...	1	...	4	...	2	...	...	...	2	...	5
" 15 " 20 "	...	6	...	7	...	9	...	5	...	3	...	4
" 20 " 30 "	13	...	15	...	23	...	16	...	16	...	22	...
" 30 " 40 "	21	...	24	...	22	...	20	...	20	...	15	...
" 40 " 50 "	21	...	9	...	19	...	13	...	18	...	18	...
" 50 " 60 "	16	...	12	...	12	...	9	...	14	...	8	...
" 60 " 70 "	8	...	10	...	11	...	5	...	14	...	10	...
" 70 " 80 "	2	...	8	...	8	...	9	...	7	...	9	...
" 80 " 90 "	2	...	6	...	3	...	3	...	9	...	4	...
" 90 " 100 "	2	...	1	...	...	...	...	...	...	...	...	...
Totals	85	120	85	111	98	122	75	112	98	93	86	108
Weekly mortality	205		196		220		187		191		194	

2D QUARTER—*Continued.*

May 15.		May 22.		May 29.		June 5.		June 12.		June 19.		June 26.		Total for the second quarter.		
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.	Total.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	8	...	8	...	7	...	11	...	2	...	8	...	14	...	118	118
...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1
...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	3	4
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1
...	1	...	1	...	...	...	2	1	...	...	1	...	...	1	12	13
...	...	...	1	...	1	...	...	...	...	...	1	...	...	...	3	3
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	2	2
...	...	...	...	...	...	1	2	...	...	...	1	...	...	1	4	5
...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	2
...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	2
...	...	...	...	1	...	1	...	...	...	...	1	1	...	6	1	7
...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	3	3
4	6	1	4	3	2	2	4	2	4	6	...	6	4	37	40	77
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3
...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
23		19		19		18		9		20		19		242		
2		...		2		2		3		3		2		33		
16		14		17		19		13		3		30		221		
...	42	...	39	...	46	...	47	...	28	...	43	...	59	...	608	
...	24	...	21	...	17	...	19	...	18	...	24	...	28	...	271	
...	25	...	33	...	19	...	14	...	20	...	29	...	19	...	280	
...	12	...	14	...	5	...	7	...	11	...	1	...	5	...	123	
...	4	...	4	...	6	...	5	...	4	...	3	...	1	...	41	
...	2	...	4	...	5	...	5	...	9	...	5	...	3	...	67	1390
13	...	24	...	24	...	10	...	13	...	25	...	21	...	235	...	
19	...	20	...	19	...	21	...	12	...	13	...	22	...	248	...	
16	...	15	...	16	...	13	...	9	...	10	...	19	...	196	...	
11	...	12	...	7	...	8	...	6	...	13	...	4	...	132	...	
11	...	8	...	9	...	8	...	3	...	7	...	7	...	111	...	
4	...	8	...	7	...	1	...	3	...	9	...	2	...	77	...	
1	...	5	...	4	...	3	...	5	...	3	...	...	...	43	...	
...	...	...	...	...	...	1	...	1	...	1	...	...	...	6	...	1053
75	109	92	115	86	98	65	97	52	85	81	105	75	115	1053	1390	2443
184		207		184		162		137		186		190				

TABLE OF

Collated from returns to the Board of Health of Philadelphia,

THIRD QUARTER. (Commencing

	July 3.		July 10.		July 17.		July 24.		July 31.		Aug. 7.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Abortion	...	...	...	...	...	...	...	...	...	...	...	...
Abscess	1	...	...	1	...	...	...	...	...	...	...	...
" of the brain	...	...	...	...	...	...	...	...	...	1	...	...
" liver	...	...	...	...	...	...	...	...	...	...	...	...
" lungs	...	...	...	...	...	...	...	...	...	...	...	...
Albuminuria	...	...	...	...	...	...	...	...	1	...	...	...
Anæmia	...	1	...	...	...	...	...	...	...	...	...	...
Angina pectoris	...	...	...	...	...	...	1	...	...	...	...	...
Anthrax	...	...	...	...	...	...	...	...	1	...	...	...
Apoplexy	1	...	2	...	3	...	...	1	...	...	2	...
Asphyxia	...	2	...	...	...	...	...	...	...	...	...	...
Asthma	...	...	1	...	1	...	...	...	...	...	...	...
Cancer and scirrhus	1	...	1	...	...	...	...	...	...	...	...	...
" of the mammæ	1	...	1	...	...	...	...	...	...	...	...	...
" stomach and bowels	1	...	...	...	...	...	...	...	2	...	...	...
" larynx	...	...	...	...	...	...	...	...	...	...	...	...
" liver	...	...	...	...	...	...	...	...	...	...	1	...
" mouth	...	...	...	...	...	...	...	...	...	...	...	...
" uterus	...	...	...	...	...	...	...	...	...	...	1	...
Cancrum oris	...	...	...	...	...	...	...	...	...	...	...	...
Caries of the spine	...	...	...	...	...	...	...	...	...	...	...	...
Casualties	...	...	3	...	1	2	2	2	1	...	3	...
" burns and scalds	...	...	...	1	2	...	...	...	...	...	...	...
" concussion of brain	...	...	...	...	...	1	...	...	...	...	...	...
" drowned	...	1	3	2	2	...	1	...	2	3	1	1
" suicide	...	...	...	...	...	...	...	...	...	...	...	...
" violence	...	...	...	...	...	...	...	...	...	...	...	1
Catalepsy	...	...	...	...	...	...	...	...	...	...	...	...
Cholera infantum	...	20	...	29	...	38	...	30	...	41	...	25
" morbus	...	...	1	1	2	...	1	2	2	...	...	...
Cirrhosis of liver	...	...	1	...	...	...	1	...	...	...	...	...
Colic	...	...	...	...	...	...	...	...	...	...	...	...
Constipation	...	...	...	...	...	...	...	...	...	...	...	...
Consumption of the bowels	...	...	...	...	...	...	...	...	...	...	...	...
" lungs	14	8	24	3	15	2	5	3	15	6	19	3
Congestion	...	...	...	...	...	...	...	...	...	...	2	...
" of the brain	...	1	...	1	1	4	2	3	1	3	...	...
" liver	...	...	...	...	...	1	...	...	...	...	...	...
" lungs	...	...	1	...	...	1	...	1	...	2	...	...
Convulsions	...	7	...	14	1	8	2	18	...	14	...	15
" puerperal	...	...	...	...	1	...	1	...	...	...	1	...
Coryza	...	1	...	...	...	...	...	...	...	...	...	...
Cramp	...	1	...	...	...	...	...	...	...	...	...	1
Croup	...	2	...	3	...	3	...	1	...	2	...	4
Coup de soleil	...	...	1	...	...	...	...	...	1	...	...	...
Cyanosis	...	1	...	...	...	...	...	1	...	2	...	...
Debility	1	6	4	3	...	5	1	4	7	3	4	4
Diabetes	1	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	1	4	2	3	...	6	1	3	...	3	1	5

MORTALITY,

for the year 1852, W. S. W. RUSCHENBERGER, M. D.

July 3, 1852.)

Aug. 14.		Aug. 21.		Aug. 28.		Sept. 4.		Sept. 11.		Sept. 18.		Sept. 25.		Total for the third quarter.		
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.	Total.
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
1	...	...	...	...	...	1	...	...	...	...	...	...	...	2	...	2
...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	8
2	...	1	...	2	...	...	1	...	...	2	...	1	...	16	2	18
...	2	...	...	...	1	1	1	...	...	...	...	...	1	7	1	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
...	...	...	...	2	...	...	...	...	...	...	1	1	...	5	1	6
1	...	...	...	...	...	1	...	...	...	...	...	...	...	4	...	4
...	1	...	...	...	...	...	...	...	...	...	...	...	...	3	1	4
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	2
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
3	...	...	...	3	1	3	2	1	...	...	1	1	2	21	10	31
...	...	...	1	...	...	...	1	...	...	...	1	1	...	3	4	7
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
5	...	2	...	3	1	2	...	1	...	1	...	2	...	25	8	33
...	...	...	...	1	...	1	...	...	...	...	...	1	...	3	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
...	20	...	20	...	19	...	19	...	14	...	8	...	4	...	287	287
1	1	...	1	...	1	...	...	1	...	1	...	...	...	9	6	15
...	...	...	...	...	...	2	...	...	...	...	...	1	...	5	...	5
...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
...	...	1	...	...	...	...	...	...	2	...	...	...	...	1	2	3
14	4	12	3	16	4	16	4	17	3	18	6	13	4	198	48	246
...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3
...	2	...	...	2	1	1	...	1	3	1	1	...	2	9	21	30
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	1	...	2	...	...	1	...	...	...	3	1	...	4	9	13
2	7	...	7	...	10	1	6	1	6	2	12	2	9	11	128	139
1	...	...	...	...	...	...	...	...	...	...	...	...	1	4	1	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	2	...	...	...	1	...	3	...	3	...	...	...	2	...	26	26
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
...	...	...	...	...	1	...	...	...	...	...	...	1	...	1	5	6
3	4	4	7	4	4	6	3	1	5	7	7	4	1	46	66	112
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
2	3	...	6	2	6	4	2	2	3	1	4	1	4	17	62	79

TABLE OF MORTALITY.—

	July 3.		July 10.		July 17.		July 24.		July 31.		Aug. 7.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Disease of the abdomen	...	...	...	...	...	1	...	...	...	...	...	...
" brain	...	3	...	1	...	2	...	1	...	3	1	1
" chest	...	...	...	...	...	...	...	...	...	...	...	...
" heart	3	1	...	2	...	1	2	...	1	...	...	...
" hip	...	...	...	...	...	...	...	...	...	...	...	...
" knee	...	...	...	...	...	...	...	...	1	...	...	...
" liver	...	...	...	...	1	...	...	...	1	...	...	...
" lungs	...	...	...	...	...	...	...	...	...	...	...	...
" mouth	...	...	...	...	...	...	...	...	...	...	...	...
" parotids	...	...	...	...	...	...	...	...	...	...	...	...
" prostate gland	...	...	...	...	1	...	...	...	...	...	...	...
" stomach and bowels	...	...	...	...	...	...	1	...	...	...	...	1
" urinary organs	...	...	...	...	...	...	...	...	...	...	...	...
" uterus	...	...	...	...	...	...	...	...	1	...	...	...
Dropsy	3	3	1	1	2	...	1	...	...	...	1	...
" abdominal	...	...	2	...	1	...	...	...	...	...	1	...
" of the brain	...	5	1	6	...	6	1	8	...	...	1	...
" chest	...	...	2	2	...	...	1	...	...	...	1	...
" heart	...	...	...	...	...	...	1	1	...	...	...	...
Dysentery	5	7	5	7	11	19	11	15	11	19	22	29
Effusion	...	1	...	...	...	...	...	...	...	...	...	...
" on the brain	...	3	1	2	...	2	...	3	...	3	1	3
" chest	...	...	...	...	...	...	...	...	...	...	...	...
" lungs	...	...	...	1	...	...	...	...	...	...	...	...
Enlargement of the heart	1	1	...	...	...	...	1	...	1	...	...	...
Epilepsy	...	1	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	1	...	...	2	1	...	...	2	...
Fever	...	1	1	...	...	...	...	...	1	...	...	...
" bilious	...	...	...	...	...	...	...	...	1	...	...	...
" catarrhal	...	...	...	...	...	...	...	...	...	...	...	...
" congestive	...	1	...	...	...	...	...	...	...	...	...	...
" heetic	...	...	...	...	...	...	1	...	...	...	...	...
" intermittent	...	...	...	...	...	...	...	...	...	...	...	...
" puerperal	...	...	1	...	...	...	...	...	1	...	2	...
" remittent	...	...	...	...	1	...	...	...	...	...	...	...
" scarlet	...	5	1	2	...	5	...	1	...	2	...	3
" synocha	...	...	...	...	...	...	...	...	...	...	...	...
" typhoid	...	...	4	...	1	...	2	...	1	1	1	...
" typhus	2	...	4	...	2	1	1	...	1	...	1	...
Fracture of the pelvis	...	...	...	...	...	...	...	...	...	...	...	...
" skull	...	...	...	...	...	1	...	...	...	...	...	...
Gangrene	...	...	...	...	...	1	...	1	...	1	1	...
Hemorrhage	...	1	1	...	...	...	...	1	...	...	1	...
" of the lungs	...	...	...	...	1	...	...	...	...	...	...	...
" stomach and bowels	...	...	...	...	...	...	...	1	...	...	...	...
" from the umbilicus	...	1	...	...	1	...	...	...	...	...	...	...
" " uterus	...	...	1	...	...	...	...	...	...	...	...	...
Hernia	...	...	...	...	1	...	...	...	...	...	...	...
Ioterus	...	1	...	...	...	...	...	...	1	...	...	...
Inanition	...	3	...	1	...	2	...	3	...	...	...	2
Inflammation	...	1	...	...	...	...	...	...	...	...	...	...
" of the bladder	...	...	...	...	...	...	...	...	...	...	...	...
" brain	...	8	...	4	1	12	...	4	...	4	1	4

3D QUARTER—*Continued.*

Aug. 14.		Aug. 21.		Aug. 28.		Sept. 4.		Sept. 11.		Sept. 18.		Sept. 25.		Total for the third quarter.		
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.	Total.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	3	1	3	...	1	...	3	1	1	...	...	...	1	3	23	26
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
...	...	4	...	...	...	1	1	2	...	1	...	2	...	16	5	21
...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	1	1	...	...	...	...	...	...	...	...	1	...	4	1	5
...	...	...	...	...	...	...	...	...	...	2	...	1	...	3	...	3
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	1	...	...	...	1	1	2	...	...	...	...	2	5	7
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
1	...	2	...	3	...	1	...	3	1	3	2	2	3	22	10	32
2	...	...	...	2	...	...	...	1	...	1	1	1	...	11	1	12
...	6	...	3	...	3	1	5	...	4	...	6	...	3	4	55	59
...	...	...	...	...	1	...	...	...	...	1	...	...	1	5	4	9
...	...	...	...	...	...	1	...	2	1	...	1	...	...	4	3	7
22	28	9	37	16	23	8	15	15	9	16	11	9	11	160	230	390
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	3	...	...	...	1	...	...	...	1	1	2	3	23	26
...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	2
...	1	...	...	...	...	1	...	2	...	...	...	...	...	6	2	8
1	1	...	...	...	...	1	...	...	...	...	...	1	...	3	2	5
2	...	...	...	1	...	1	1	2	...	...	...	...	...	10	3	13
...	...	...	...	...	...	...	...	1	...	...	1	2	...	4	3	7
...	...	...	...	...	...	...	...	...	...	1	...	1	...	3	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1
...	1	...	...	...	...	...	1	...	...	...	...	1	1	1	4	5
...	...	...	2	...	...	...	...	...	...	...	1	...	...	1	3	4
...	...	...	...	1	...	...	1	...	...	...	...	...	...	1	1	2
...	...	...	...	...	...	...	...	...	...	1	...	...	...	5	...	5
...	1	1	...	...	...	2	1	2	1	1	1	1	...	3	4	12
...	...	...	3	...	3	...	5	...	5	...	2	...	9	1	45	46
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
4	1	4	...	1	1	...	...	1	...	2	1	2	2	23	6	29
1	1	...	...	1	...	3	2	3	1	2	2	2	1	23	3	31
...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
1	...	...	...	...	...	...	...	...	...	1	...	...	1	3	4	7
...	...	...	...	...	...	...	...	1	...	...	...	...	...	3	2	5
...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	2	3
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
1	...	1	...	...	...	...	...	...	...	1	...	...	...	4	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	1	...	1	...	...	...	...	...	...	...	...	...	1	1	4	5
...	3	...	3	...	7	...	2	...	2	...	1	...	...	...	29	29
...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	2
1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	1	2
1	5	...	2	2	6	...	4	1	11	...	4	1	1	7	69	76

TABLE OF MORTALITY.—

	July 3.		July 10.		July 17.		July 24.		July 31.		Aug. 7.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Inflammation of the bronchi	2	...	1	2	...	1	1	...	...	...	2	3
" chest	...	...	...	...	...	...	...	1	...	...	...	...
" heart	...	...	...	...	...	...	...	...	1	...	...	...
" kidneys	...	...	...	...	...	...	...	...	1	...	...	...
" larynx	...	...	...	...	...	...	...	...	...	...	...	...
" liver	...	...	...	1	...	...	1	...	1	...	1	...
" lungs	2	6	1	4	...	5	1	8	...	...	...	4
" peritoneum	1	...	...	2	...	...	2	...	...	...	...	...
" pleura	...	...	...	...	...	...	...	...	...	...	1	...
" spine	...	...	...	...	...	1	1	...	...	...	...	...
" stomach and bowels	...	2	4	4	1	2	2	8	...	8	7	1
" throat	...	1	1	...	...	...	...	...	...	...	...	...
" uterus	...	...	1	...	...	...	2	...	...	...	1	...
Intemperance	1	...	...	...	1	...	2	...	2	...	2	...
Intussusception	...	...	...	...	...	...	...	...	...	...	...	...
Malformation	...	1	...	1	...	1	...	...	...	...	...	...
Mania	...	...	1	...	1	...	...	...	1	...	...	...
Mania à potu	...	...	1	...	1	...	...	...	8	...	...	...
Mania, puerperal	...	...	...	...	...	...	...	...	...	...	...	...
Marasmus	...	8	...	12	...	13	...	11	1	10	...	12
Measles	...	1	...	2	...	1	...	1	...	...	...	...
Melæna	...	...	...	...	...	...	...	...	...	...	...	...
Obstruction of the bowels	...	...	...	...	...	...	...	...	...	...	...	...
" trachea	...	...	...	...	...	...	...	...	...	...	...	...
Old age	8	...	8	...	2	...	2	...	2	...	2	...
Orchitis	...	...	...	...	...	...	...	...	...	...	1	...
Ossification of the heart	...	...	...	...	...	...	...	...	...	...	1	...
Palsy	2	...	3	...	4	...	1	...	2	...	3	1
Purpura	...	...	...	...	...	...	...	...	...	...	...	1
Rheumatism	1	...	...	...	1	...	...	...	...	...	...	...
Rupture of the bowels	...	...	...	...	...	1	...	...	...	...	...	...
Scorbutus	...	...	...	...	...	...	1	...	...	...	...	...
Scrofula	1	1	...	...	...	1	...	...	...	1	...	...
Smallpox	8	5	...	1	...	1	...	...	...	2	...	5
Softening of the brain	...	...	...	...	...	...	2	...	...	...	...	...
Stillborn	...	18	...	18	...	8	...	6	...	8	...	13
Strangury	...	...	...	...	...	...	...	...	...	...	1	...
Syphilis	...	...	...	...	1	...	...	...	...	...	...	...
Tabes mesenterica	...	...	...	...	...	1	...	1	...	...	...	1
Teething	...	1	...	...	...	...	...	...	...	2	...	...
Tetanus	...	...	...	...	...	...	...	...	...	...	...	...
Trismus	...	...	...	...	...	...	...	...	...	1	...	...
Tuberculosis	...	...	...	...	...	...	...	1	...	...	1	...
Tumor	...	...	...	...	...	...	...	...	...	...	1	...
" of the mouth	...	...	...	...	...	...	...	...	...	...	...	...
Ulcer	...	...	...	...	...	...	1	...	...	...	...	...
" of the stomach and bowels	1	...	...	...	...	...	...	...	...	...	1	...
" throat	...	...	...	2	...	...	...	1	...	...	...	...
" urethra	...	...	...	...	1	...	...	...	...	...	...	...
" uterus	...	...	...	...	...	...	...	...	...	...	...	...
Unknown	2	8	2	8	...	2	5	8	1	2	1	2
Varioloid	...	...	...	...	...	...	...	...	...	1	...	...
Whooping-cough	...	1	...	...	...	...	...	...	...	1	...	1

3D QUARTER—*Continued.*

Aug. 14.		Aug. 21.		Aug. 28.		Sept. 4.		Sept. 11.		Sept. 18.		Sept. 25.		Total for the third quarter.		
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.	Total.
1	2	...	1	2	3	...	...	...	1	1	2	...	1	10	16	26
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	2
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	1	...	1	...	5	1	6
...	4	2	3	1	2	1	...	1	1	...	4	2	...	11	36	47
...	...	...	...	1	...	...	...	1	1	1	1	...	...	6	4	10
...	...	...	...	1	...	...	...	...	...	1	...	...	...	3	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
4	...	2	5	6	5	...	6	1	...	3	4	7	8	37	48	85
...	...	...	...	...	...	...	...	...	...	...	2	...	...	1	3	4
...	...	...	...	...	...	...	...	2	...	1	...	...	...	7	...	7
2	...	1	...	1	...	...	...	2	...	1	...	4	...	19	...	19
...	...	1	...	...	...	...	...	...	...	...	...	1	...	2	...	2
...	1	...	...	...	2	...	1	...	1	...	...	...	...	...	8	8
1	...	2	...	...	...	...	...	...	...	...	...	...	...	6	...	6
...	...	...	...	1	...	...	...	...	...	1	...	...	...	7	...	7
...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	11	1	12	...	9	1	6	...	6	...	9	1	5	4	124	128
...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	7	7
...	...	...	...	...	...	...	...	1	...	1	...	...	...	2	...	2
...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	2
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
2	...	2	...	2	...	2	...	3	...	2	...	3	...	30	...	30
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
3	...	1	...	...	...	...	...	...	...	1	1	1	...	21	2	23
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
1	...	2	...	...	...	1	...	...	...	...	...	...	...	6	...	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	1	1	...	...	2	1	...	...	...	...	...	...	...	3	6	9
...	...	1	1	...	2	...	4	...	...	...	1	...	3	4	25	29
...	...	...	...	1	...	...	...	...	...	1	...	...	...	4	...	4
...	6	...	9	...	10	...	11	...	7	...	9	...	5	...	118	118
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
...	2	...	2	...	1	...	3	...	...	...	...	...	2	...	13	13
...	1	...	1	...	...	...	1	...	...	...	1	...	...	...	7	7
...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
2	1	...	1	1	...	1	...	...	...	1	...	...	1	6	4	10
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
2	...	...	...	1	...	...	...	2	...	...	...	...	...	7	...	7
...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	5	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
5	2	1	2	3	2	4	3	1	2	...	...	3	3	28	29	57
...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	3	3
...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	4	4

TABLE OF MORTALITY.

	July 6.		July 10.		July 17.		July 24.		July 31.		Aug. 7.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Worms	...	1	...	...	...	...	...	...	...	1	...	...
Wounds	...	...	...	...	...	...	...	...	...	...	...	...
From the almshouse	17		17		17		19		18		15	
From the country	1		8		3		5		2		...	
People of color	18		17		10		20		6		6	
Under 1 year	...	71	...	79	...	94	...	85	...	83	...	92
From 1 to 2 years	...	25	...	30	...	28	...	36	...	37	...	21
" 2 " 5 "	...	25	...	21	...	22	...	15	...	12	...	20
" 5 " 10 "	...	5	...	9	...	10	...	5	...	14	...	14
" 10 " 15 "	...	4	...	3	...	4	...	3	...	5	...	3
" 15 " 20 "	...	6	...	5	...	6	...	3	...	5	...	2
" 20 " 30 "	12	...	28	...	16	...	17	...	15	...	19	...
" 30 " 40 "	18	...	15	...	18	...	11	...	17	...	20	...
" 40 " 50 "	12	...	19	...	10	...	12	...	10	...	14	...
" 50 " 60 "	4	...	8	...	13	...	8	...	4	...	11	...
" 60 " 70 "	6	...	6	...	9	...	11	...	12	...	16	...
" 70 " 80 "	8	...	8	...	4	...	5	...	8	...	11	...
" 80 " 90 "	...	...	4	...	1	...	2	...	3	...	5	...
" 90 " 100 "	...	...	...	...	...	...	1	...	1	...	2	...
" 100 and upwards	...	...	...	...	1	...	...	...	1	...	...	...
Totals	55	186	88	147	67	164	67	147	71	156	98	152
Weekly mortality	191		235		231		214		227		250	

3D QUARTER—*Continued.*

Aug. 14.		Aug. 21.		Aug. 28.		Sept. 4.		Sept. 11.		Sept. 18.		Sept. 25.		Total for the third quarter.		
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.	Total.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
26		13		17		16		10		18		22		220		
5		3		4		3		2		1		2		39		
18		9		23		8		14		16		19		184		
...	69	...	70	...	64	...	61	...	44	...	49	...	40	...	901	
...	30	...	40	...	34	...	32	...	19	...	27	...	25	...	884	
...	17	...	19	...	18	...	29	...	18	...	22	...	14	...	252	
...	11	...	6	...	9	...	3	...	9	...	8	...	7	...	110	
...	5	...	2	...	4	...	1	...	3	...	3	...	6	...	46	
...	8	...	7	...	5	...	5	...	4	...	4	...	9	...	69	1762
22	...	23	...	20	...	22	...	19	...	21	...	26	...	260	...	
27	...	10	...	14	...	10	...	20	...	18	...	23	...	211	...	
12	...	10	...	19	...	13	...	16	...	17	...	11	...	175	...	
14	...	4	...	13	...	11	...	8	...	8	...	11	...	117	...	
10	...	7	...	11	...	10	...	10	...	11	...	6	...	125	...	
9	...	4	...	8	...	4	...	8	...	7	...	5	...	89	...	
4	...	4	...	3	...	3	...	2	...	2	...	3	...	86	...	
...	...	...	...	1	...	...	...	2	...	...	...	1	...	8	...	
...	...	...	...	1	...	...	...	...	...	...	...	...	...	8	...	1024
98	140	62	144	90	184	73	131	85	97	84	118	86	101	1024	1762	2786
288		206		224		204		182		197		187				

TABLE OF

Collated from returns to the Board of Health of Philadelphia,

FOURTH QUARTER. (Commencing

	Oct. 2.		Oct. 9.		Oct. 16.		Oct. 23.		Oct. 30.		Nov. 6.		Nov. 13.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Abortion	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abscess	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" abdominal	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" of the brain	...	...	...	...	...	...	...	...	1	...	...	...	...	...
" liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" lungs	...	1	...	...	...	...	...	...	1	...	...	...	...	...
" neck	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" psoas	...	...	...	...	...	...	...	...	...	...	...	...	1	...
" spleen	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" throat	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" thymic	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Albuminuria	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Anæmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Angina pectoris	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Aneurism of aorta	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Anthrax	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Anuria	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Apoplexy	3	...	1	...	1	...	1	...	8	...	5	1	1	...
Aphthæ	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Asphyxia	...	...	...	...	...	...	...	1	...	...	...	1	...	...
Asthma	2	...	...	...	...	...	...	...	1	1	...	...	...	...
" thymic	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Atrophy of the brain	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cachexia	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Cancer and scirrhus	...	...	...	...	1	...	...	...	...	...	3	...	...	...
" of the face	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" mammæ	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" pylorus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" stomach and bowels	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" larynx	...	...	...	...	...	...	...	...	...	...	...	...	1	...
" liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" pancreas	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" rectum	...	...	...	...	..	...	...	...	...	...	...	...	...	...
" uterus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cancrum oris	...	...	...	2	...	1	...	...	...	1	...	...	...	...
Caries	...	...	2	...	...	...	...	...	...	...	...	...	...	...
" of the spine	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Casualties	3	...	...	...	1	1	...	...	2	2	2	...	...	...
" burns and scalds	...	1	...	1	...	1	...	...	...	1	...	...	...	...
" concussion of the brain	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" drowned	1	...	...	...	2	1	...	...	...	...	...	...	2	1
" gunshot wounds	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" injury of the head	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" perineum	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" neglect and exposure	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" poisoning	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" suicide	...	...	...	...	2	...	...	...	...	...	...	...	...	...
" violence	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Catalepsy	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Childbed	...	...	...	...	...	...	...	...	...	...	...	...	...	...

MORTALITY,

for the year 1852, by W. S. W. RUSCHENBERGER, M. D.
September 26, 1852.)

Nov. 20.		Nov. 27.		Dec. 4.		Dec. 11.		Dec. 18.		Dec. 25.		Total for the quarter.		Total fourth quarter.	Total third quarter.	Total second quarter.	Total first quarter.	Total for the year.
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.					
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	4	2	8
1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	1	3
...	1	1	...	...	...	1	...	...	...	...	...	2	1	3	2	1	1	7
...	...	...	1	1	...	...	...	...	...	...	1	2	3	5	1	2	8	16
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2
1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	1	3	6
...	...	...	1	...	...	...	...	...	...	...	...	...	3	3	1	1	3	8
1	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	...	1	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	2	...	3	...	2	...	2	...	2	...	26	1	27	18	22	24	91
...	...	...	...	...	...	...	1	...	...	...	...	...	2	2	...	1	...	3
...	3	...	1	...	3	...	...	...	...	...	...	...	9	9	8	4	7	28
...	...	...	...	...	...	...	...	...	...	...	...	3	1	4	2	3	3	12
...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	1	2
...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	1	...	2
...	...	...	...	2	...	...	...	...	...	...	...	2	1	3	...	6	2	11
...	...	...	...	...	...	...	1	...	...	...	...	5	...	5	6	4	3	18
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	3	4	11
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
1	...	...	...	...	...	...	1	...	...	...	...	2	...	2	4	4	4	14
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	2	3	5	11
...	...	...	1	...	1	...	...	...	...	...	1	...	7	7	1	6	2	16
...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	2	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	4
1	...	1	...	...	...	2	...	1	1	...	1	13	5	18	31	15	22	86
...	2	1	2	...	...	...	1	...	...	...	...	1	9	10	7	5	7	29
...	...	...	...	1	...	...	...	...	...	...	...	1	...	1	1	1	3	6
1	...	1	...	...	...	...	...	1	1	...	1	8	4	12	33	26	4	75
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	1	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	1	1	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	...	...	...	...	...	1	...	...	...	...	...	3	...	3	3	2	4	12
...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	3	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1

TABLE OF MORTALITY.—

	Oct. 2.		Oct. 9.		Oct. 16.		Oct. 23.		Oct. 30.		Nov. 6.		Nov. 13.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Chlorosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera infantum	...	4	...	4	...	...	...	1	...	1	...	...	...	...
" morbus	...	...	...	...	...	...	...	...	5	...	...	1	4	...
Chorea	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis of the liver	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Colic	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coma	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Compression of the brain	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Constipation	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Consumption of the brain	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" bowels	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" lungs	21	1	19	3	16	6	7	5	24	5	20	2	19	2
" laryngeal	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congestion	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" of the brain	1	4	1	...	1	1	...	...	...	1	1	...	1	...
" liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" lungs	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Convulsions	...	4	...	5	...	5	...	2	...	6	1	6	1	4
" puerperal	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coryza	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cramp	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Croup	...	1	...	...	...	8	...	4	...	3	...	6	...	3
Coup de soleil	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cyanosis	...	...	...	2	...	...	...	...	...	...	...	1	...	...
Debility	5	4	1	2	1	2	3	2	3	5	5	2	8	2
Diabetes	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	1	2	...	4	1	3	1	1	1	2	1	2	1	1
Disease of the abdomen	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" bladder	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" brain	...	...	1	3	...	...	1	...	...	1	2	1	...	...
" chest	...	...	...	...	...	...	...	...	...	2	...	...	...	...
" elbow	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" heart	2	1	...	1	...	1	3	1	4	...	...	2	1	1
" hip	...	...	...	...	...	1	...	...	...	...	...	...	...	...
" kidneys	...	...	...	...	1	...	1	...	...	...	1	1	...	...
" knee	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" leg	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" liver	...	...	1	...	...	...	...	...	1	...	1	1	...	...
" lungs	...	...	1	...	...	...	...	...	...	...	...	1	...	...
" mesenteric glands	...	...	...	...	...	...	...	...	...	...	...	1	...	...
" mouth	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" parotids	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" prostate gland	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" spine	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" spleen	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" stomach and bowels	...	...	...	...	...	...	...	...	...	...	...	...	1	2
" throat	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" urinary organs	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" uterus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dropsy	3	1	...	3	1	8	...	...	...	...	5	...	2	1
" abdominal	2	...	1	...	1	...	...	...	...	1	...	...	1	...
" brain	...	7	1	3	...	8	...	1	...	4	...	5	...	...
" chest	...	...	...	...	1	...	...	...	...	...	...	...	...	...

4TH QUARTER—*Continued.*

Nov. 20.		Nov. 27.		Dec. 4.		Dec. 11.		Dec. 18.		Dec. 25		Total for the quarter.		Total fourth quarter.	Total third quarter.	Total second quarter.	Total first quarter.	Total for the year.
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.					
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
...	...	...	...	...	...	...	8	...	...	...	...	...	13	13	287	24	6	330
3	...	1	...	3	1	3	...	1	...	1	...	21	2	23	15	6	1	45
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	5	1	...	7
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	3	4	9
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	...	4
17	4	28	1	19	...	17	5	20	8	8	2	235	89	274	246	305	357	1182
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	2	6
...	1	1	...	2	...	...	1	1	2	2	3	11	13	24	30	45	25	124
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	5	7
...	2	...	...	2	8	...	...	...	2	...	...	2	8	10	13	13	26	62
...	3	...	11	...	6	...	8	...	8	...	9	2	77	79	139	125	140	483
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	5	6	16
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2
...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	2	7	...	10
...	8	...	6	...	10	...	8	...	6	...	5	...	63	63	26	41	57	187
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	3	...	5
...	...	...	...	...	...	...	...	...	1	...	...	...	...	4	6	9	9	28
9	6	3	3	6	3	4	3	6	4	3	2	62	40	102	112	64	63	341
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2
2	1	1	...	1	...	...	...	...	2	...	1	10	19	29	79	20	26	154
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	3	...	...	...	...	...	5	...	2	1	1	5	16	21	26	21	31	99
...	...	...	1	1	...	...	...	...	...	...	1	1	4	5	1	1	3	10
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
5	...	3	1	1	...	1	...	1	...	...	2	21	10	31	21	34	38	124
...	...	...	...	1	...	...	...	...	...	...	...	1	1	2	1	...	1	4
...	...	...	...	...	...	...	...	...	...	...	...	3	1	4	...	4	1	9
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2
...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1
1	...	...	...	...	...	1	1	...	...	...	...	5	2	7	5	4	5	21
...	...	1	1	...	...	...	1	...	...	...	...	2	3	5	3	7	6	21
...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	1	...	...	...	...	2	...	...	...	...	...	3	3	6	7	5	9	27
...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	1	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2
2	...	1	...	5	...	5	2	1	1	1	...	26	11	37	32	27	27	123
...	...	1	...	1	...	1	...	1	...	2	...	11	1	12	12	10	7	41
...	...	...	3	...	3	...	4	...	1	...	3	1	37	38	59	70	69	236
...	...	1	...	...	...	1	...	...	1	...	...	3	1	4	9	21	12	46

TABLE OF MORTALITY.—

	Oct. 2.		Oct. 9.		Oct. 16.		Oct. 23.		Oct. 30.		Nov. 6.		Nov. 13.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Dropsy of the heart	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" ovarian	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery	4	7	1	9	2	6	2	5	2	2	2	2	4	2
Dyspepsia	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Effusion	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" on the brain	1	...	...	...	1	8	2	1	1	1	...	...	1	1
" chest	...	...	...	...	...	...	...	...	...	...	...	...	1	1
" heart	...	...	...	...	...	...	1	...	...	...	...	...	...	...
" lungs	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Empyema	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enlargement of the heart	...	...	...	...	...	...	1	1	...	...	...	...	...	...
" liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" prostate gland	...	...	...	...	1	...	...	...	...	...	...	...	...	...
" spleen	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epilepsy	...	...	...	1	2	...	1	...	...	...	...	...	...	...
Erysipelas	1	...	...	...	...	...	...	...	1	...	...	1	...	...
Fever	...	...	...	...	1	...	...	...	2	...	...	...	1	1
" bilious	...	...	...	...	...	...	1	...	1	...	...	...	...	...
" catarrhal	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" cerebral	...	1	...	...	...	...	...	...	...	...	...	...	...	...
" congestive	...	...	...	...	...	1	...	...	...	1	...	...	...	...
" gastric	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" hectic	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" intermittent	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" inflammatory	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" nervous	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" puerperal	...	...	...	...	...	...	...	...	...	...	...	...	1	...
" remittent	2	1	...	1	...	...	...	1	...	...	1	...	...	...
" scarlet	...	2	...	4	...	8	...	9	...	12	...	13	...	11
" synocha	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" typhoid	8	...	3	1	3	1	2	1	2	1	1	2	1	2
" typhus	1	...	5	...	2	1	...	1	...	2	1	1	2	1
" variolous	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fracture of the leg	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" pelvis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" skull	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Fungus hæmatodes	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gangrene	2	...	...	...	...	...	...	...	1	...	...	...	1	...
" of the lungs	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gout	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hemorrhage	...	...	...	...	1	1	1	...	1	...	...	...	...	...
" from the lungs	...	...	1	...	1	...	1	...	...	...	...	...	...	...
" stomach and bowels	...	...	...	...	...	...	...	...	1	...	1	...	1	...
" umbilicus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" uterus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hepatization of the lungs	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hernia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Icterus	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Ileus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Inanition	...	4	...	...	...	1	...	...	...	...	2	1	...	2
Inflammation	...	1	...	...	...	...	...	...	...	...	...	...	1	...
" of the bladder	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" brain	1	3	...	2	2	4	1	2	...	3	1	...	1	5

4TH QUARTER—*Continued.*

Nov. 20.		Nov. 27.		Dec. 4.		Dec. 11.		Dec. 18.		Dec. 25.		Total for the quarter.		Total fourth quarter.	Total third quarter.	Total second quarter.	Total first quarter.	Total for the year.
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.					
...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	7	4	1	13
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3
...	...	4	1	...	...	1	1	1	...	...	...	28	35	58	390	55	34	537
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	...	1	...	...	2	2	...	2	1	...	9	11	20	26	26	21	93
...	...	...	1	...	...	...	...	...	...	...	...	1	2	3	1	3	3	10
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	2	3
...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	2	1	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	8	3	10	23
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
1	...	...	...	...	...	...	...	1	1	...	...	5	2	7	5	7	4	23
1	...	1	2	1	...	...	...	1	1	...	...	6	4	10	13	24	44	91
...	...	...	...	...	...	1	...	...	1	...	...	4	3	7	7	9	7	30
...	...	...	...	1	...	...	...	...	1	...	...	3	1	4	3	...	1	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2
...	...	...	...	...	1	...	...	...	...	...	...	2	...	2	...	...	2	4
...	...	...	1	...	1	...	...	...	...	...	...	1	3	4	5	2	4	15
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	4	1	...	6
...	...	...	...	...	...	...	...	...	...	1	...	1	1	2	1	1	5	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	1	...	1	...	...	...	...	2	...	2	...	...	...	2
1	...	1	...	...	...	...	...	...	...	...	...	3	...	3	5	3	27	43
1	...	...	...	...	1	...	...	...	...	...	...	4	4	8	12	10	6	36
...	14	...	18	1	13	...	18	...	14	...	21	1	152	153	46	93	127	419
...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	1	1	...	3
3	...	1	...	5	1	2	2	2	...	3	...	31	11	42	29	40	20	131
4	...	6	...	5	1	7	...	1	2	3	...	37	9	46	31	49	28	154
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	1	1	4
...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1
...	1	...	...	...	...	...	...	1	...	...	...	5	1	6	7	7	7	27
...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	1	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3
1	...	...	...	1	...	...	1	...	...	...	1	5	3	8	5	2	13	28
...	...	1	...	1	...	...	...	...	...	1	...	6	...	6	8	5	8	22
1	1	...	...	...	...	...	...	...	1	...	...	4	2	6	2	2	2	12
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	3
...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	4	2	3	10
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	4	8
...	1	...	...	...	1	...	...	...	...	...	...	3	1	4	5	4	2	15
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	1	...	2	...	...	...	1	2	12	14	29	22	29	94
...	...	...	...	...	...	1	...	...	...	...	...	2	1	3	2	5	3	13
...	...	...	...	1	...	...	...	...	...	...	...	1	...	1	2	2	4	9
...	3	...	4	...	...	...	8	...	4	1	...	7	38	45	76	68	65	254

TABLE OF MORTALITY.—

	Oct. 2.		Oct. 9.		Oct. 16.		Oct. 23.		Oct. 30.		Nov. 6.		Nov. 13.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Inflammation of the bronchi	...	...	...	2	...	2	1	3	1	2	...	...	...	...
" chest	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" heart	...	...	...	...	1	...	1	...	...	...	...	...	...	...
" kidneys	...	...	...	...	...	...	...	...	...	...	...	...	...	1
" larynx	...	...	...	...	...	...	...	...	...	...	1	...	...	...
" liver	2	1	1	...	2	...	...	...	1	...	...	...	...	...
" lungs	1	1	3	2	1	2	3	3	...	1	3	3	...	4
" parotids	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" peritoneum	...	...	...	...	1	...	...	...	1	...	2	...	...	2
" pharynx	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" pleura	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" spine	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" stomach and bowels	1	5	4	2	1	3	...	1	1	5	3	3	...	2
" tonsils	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" throat	...	...	...	...	...	1	...	...	...	...	...	...	...	...
" uterus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Insanity	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Intemperance	1	...	1	...	1	...	1	...	...	...	1	...	1	...
Intussusception	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Irritation of the spine	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malformation	...	...	...	2	...	...	...	...	...	1	...	...	...	...
" of the heart	...	...	...	...	...	...	...	...	...	1	...	...	...	...
" rectum	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" spine	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mania	1	...	1	...	...	...	1	...	...	...	...	...	1	...
Mania à potu	...	...	1	...	1	...	2	...	3	...	1	...	...	...
" puerperal	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Marasmus	2	5	...	5	...	6	...	1	...	4	...	3	1	6
Measles	...	...	...	...	...	...	...	1	...	...	...	1	...	...
Melæna	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Menorrhagia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Neuralgia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Obstruction of the bowels	...	...	...	...	...	...	...	...	...	...	...	...	2	...
" trachea	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Old age	3	...	3	...	2	...	2	...	2	...	3	...	3	...
Orchitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ossification of the arteries	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" heart	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Palsy	...	...	3	...	2	...	1	...	2	...	2	...	1	...
Perforation of the stomach or bowels	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phlebitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phlegmasia dolens	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ptyalism	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Purpura	...	...	...	...	...	...	...	...	...	1	1	...	...	...
Rheumatism	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ruptare of the bowels	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" uterus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scorbutus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scrofula	...	1	...	2	...	...	...	...	2	2	...	3	...	2
Smallpox	...	...	...	1	...	1	...	2	...	1	...	1	...	1
Softening of the brain	...	...	...	...	1	...	...	...	1	...	...	...	...	...
" stomach	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Spasm of epiglottis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Spina bifida	...	...	...	...	...	...	...	...	...	...	...	...	...	...

4TH QUARTER—*Continued.*

Nov. 20.		Nov. 27.		Dec. 4.		Dec. 11.		Dec. 18.		Dec. 25.		Total for the quarter.		Total fourth quarter.	Total third quarter.	Total second quarter.	Total first quarter.	Total for the year.
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.					
1	6	1	6	...	1	...	7	1	1	1	1	6	31	37	26	56	88	207
...	1	...	1	...	...	...	...	...	1	...	1	...	4	4	1	1	8	14
...	1	...	...	...	...	...	...	...	...	1	...	3	1	4	1	8	7	20
...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	4	2	9
...	...	...	...	...	1	...	...	...	1	...	1	1	3	4	1	9	7	21
...	...	...	...	2	...	...	...	1	...	...	...	9	1	10	6	9	14	39
4	5	6	5	4	8	8	4	3	5	2	6	38	44	82	47	114	195	438
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
2	...	...	...	...	...	...	...	1	...	4	...	11	2	13	10	24	23	70
...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1
...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	3	3	4	11
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2
2	...	4	...	6	1	1	4	2	1	...	2	25	29	54	85	50	44	233
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	1	...	...	...	...	...	...	...	...	...	2	2	4	2	4	12
...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	7	6	5	19
...	...	...	...	1	2	1	...	1	...	...	...	3	2	5	...	...	3	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	1	...	...	...	7	...	7	19	5	14	45
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	3	2	7
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	1	...	1	...	...	...	...	...	1	...	...	...	6	6	8	5	7	26
...	...	...	...	...	...	...	1	...	...	...	...	...	2	2	...	1	1	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	4	4	6	1	...	11
2	...	2	...	1	...	...	2	...	...	...	...	15	...	15	7	15	15	52
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	5	...	6
...	1	1	3	...	5	...	7	1	3	...	4	5	53	58	128	78	82	346
...	...	...	1	...	...	...	...	...	...	...	...	...	3	3	7	42	38	90
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	2
1	...	...	...	...	...	...	...	...	...	...	...	3	...	3	2	3	...	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	2	...	4	...	3	...	3	...	...	...	30	...	30	30	58	71	189
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2
...	...	...	...	...	1	1	...	...	...	1	12	2	14	23	11	29	77
...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	2	2	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	3
...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	...	1	2	2
...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	1
...	1	...	...	...	...	...	...	1	...	...	1	3	4	1	2	1	8
...	...	...	...	...	...	...	...	...	1	...	1	...	1	6	6	4	17
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	3
1	1	...	...	...	4	...	2	...	1	...	3	3	26	29	9	20	10	68
...	...	...	3	...	...	1	...	...	1	...	1	...	13	13	29	126	258	426
2	...	1	...	1	...	...	...	...	1	1	...	7	1	8	4	1	2	15
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2

TABLE OF MORTALITY.—

	Oct. 2.		Oct. 9.		Oct. 16.		Oct. 23.		Oct. 30.		Nov. 6.		Nov. 13.	
	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.
Spinal meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stillborn	...	12	...	7	...	11	...	6	...	9	...	9	...	10
Stone	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Strangury	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suffocation	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Syphilis	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Tabes mesenterica	...	1	1	3	...	...	...	...	...	...	...	1	...	2
Teething	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Tetanus	...	...	...	1	...	...	...	...	1	...	...	...	...	...
Trismus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis	1	1	...	...	...	...	...	...	...	...	1	...	...	...
Tumor	...	...	...	1	...	...	1	...	...	...	...	...	...	...
" ovarian	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tympanitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ulcer	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" of the face	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" larynx	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" neck	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" stomach and bowels	...	...	...	...	...	...	2	...	...	...	...	...	...	...
" throat	...	...	...	...	...	...	...	...	...	...	...	1	...	...
" urethra	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" uterus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Unknown	3	4	...	1	2	3	8	1	4	3	2	6	4	...
Varioloid	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping-cough	...	...	...	1	...	1	...	...	...	1	...	...	...	...
Worms	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wounds	...	...	...	...	...	...	...	...	...	...	...	...	...	...
From the almshouse	24		12		12		7		12		16		17	
From the country	...		1		2		4		2		1		1	
People of color	15		10		11		15		13		8		16	
Under 1 year	...	86	...	82	...	88	...	22	...	39	...	86	...	84
From 1 to 2 years	...	25	...	17	...	15	...	10	...	14	...	10	...	10
" 2 " 5 "	...	11	...	19	...	23	...	15	...	23	...	22	...	13
" 5 " 10 "	...	6	...	8	...	13	...	8	...	2	...	9	...	7
" 10 " 15 "	...	2	...	3	...	1	...	...	...	5	...	4	...	3
" 15 " 20 "	...	1	...	4	...	9	...	3	...	7	...	4	...	8
" 20 " 30 "	19	...	14	...	16	...	10	...	17	...	20	...	13	...
" 30 " 40 "	16	...	14	...	14	...	10	...	19	...	15	...	15	...
" 40 " 50 "	15	...	9	...	11	...	10	...	11	...	9	...	13	...
" 50 " 60 "	8	...	9	...	9	...	7	...	10	...	10	...	10	...
" 60 " 70 "	11	...	6	...	7	...	7	...	8	...	9	...	8	...
" 70 " 80 "	2	...	4	...	4	...	7	...	7	...	12	...	11	...
" 80 " 90 "	5	...	1	...	2	...	...	...	5	...	3	...	5	...
" 90 " 100 "	1	...	1	...	1	...	2	...	...	...	1	...	...	...
100 and upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	77	81	58	88	64	94	58	58	77	90	79	85	75	75
Weekly mortality	158		141		158		111		167		164		150	

4TH QUARTER—*Continued.*

Nov. 20.		Nov. 27.		Dec. 4.		Dec. 11.		Dec. 18.		Dec. 25.		Total for the quarter.		Total fourth quarter.	Total third quarter.	Total second quarter.	Total first quarter.	Total for the year.
Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adult.	Minor.	Adults.	Minors.					
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
...	11	...	11	...	9	...	14	...	10	...	9	...	128	128	118	113	141	500
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	2
...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	1	...	1	2
1	...	...	1	...	...	...	...	1	...	...	...	3	1	4	...	4	4	12
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2	1	2	6
...	1	...	1	...	...	...	1	...	1	1	...	2	11	13	13	13	6	45
...	...	...	...	...	...	...	...	...	1	...	...	...	2	2	7	3	...	12
...	...	...	...	...	...	...	...	1	...	...	...	2	1	3	2	1	1	7
...	...	...	...	...	1	...	...	...	...	...	...	...	1	1	1	2	...	4
...	...	2	...	1	...	...	...	...	...	...	...	5	1	6	10	5	12	33
...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	1	1	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	3	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	1	...	...	...	...	...	3	...	3	7	7	4	21
...	...	...	...	...	...	...	1	...	...	...	1	...	3	3	5	3	4	15
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
4	...	5	4	4	4	1	1	3	3	1	...	41	30	71	57	77	65	270
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	5	11
...	1	...	...	...	...	...	1	...	...	...	...	...	5	5	4	1	6	16
...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	2	...	1	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2
22		11		25		23		17		20		208		208	220	242	262	942
3		2		...		3		1		...		20		20	39	33	24	116
16		10		18		20		21		9		182		182	184	221	257	844
...	38	...	39	...	40	...	59	...	48	...	23	...	479	...	901	608	756	2744
...	16	...	18	...	9	...	10	...	11	...	18	...	183	...	384	271	275	1118
...	25	...	27	...	20	...	18	...	21	...	28	...	265	...	252	280	316	1113
...	8	...	12	...	5	...	10	...	8	...	11	...	107	...	110	123	201	541
...	...	...	1	...	5	...	5	...	4	...	2	...	35	...	46	41	80	152
...	4	...	3	...	2	...	12	...	5	...	5	...	67	1136	69	67	81	284
															1762	1390	1659	5947
22	...	29	...	22	...	22	...	15	...	12	...	231	...	...	260	235	308	1034
16	...	17	...	19	...	15	...	20	...	12	...	202	...	...	211	248	241	902
17	...	18	...	19	...	8	...	7	...	7	...	154	...	...	175	196	187	712
14	...	14	...	7	...	14	...	9	...	4	...	125	...	...	117	132	163	537
9	...	5	...	9	...	8	...	13	...	2	...	102	...	...	125	111	112	450
1	...	6	...	10	...	6	...	4	...	5	...	79	...	...	89	77	106	351
2	...	2	...	3	...	2	...	2	...	1	...	33	...	...	36	48	59	176
1	...	...	...	4	...	1	...	1	...	...	...	13	...	...	8	6	12	39
...	...	...	...	1	...	1	...	...	...	...	...	2	...	941	3	...	2	7
82	91	91	100	94	81	77	114	71	97	48	87	941	1136		1024	1053	1190	4208
173		191		175		191		168		180		2077		2077	2786	2443	2849	10,155

Dr. ATLEE read the following:—

MEMOIR OF DR. WILLIAM R. GRANT.

WILLIAM ROBERTSON GRANT, M. D., the subject of the present memoir, was born on the 22d of December, 1811, in Pictou District, Nova Scotia, where his parents resided, on the borders of Grant's Lake.

Dr. Grant's ancestors, on his father's side, were residents of Inverness, or its vicinity, in the Highlands of Scotland. They were among the first emigrants that landed in Pictou from Scotland, in the ship Hector, and they took up the original grant for a large tract of land in that part of the Province. They, therefore, experienced many of the privations and hardships of settling in a new and uncultivated country, where the necessaries of life were scanty, and even its general comforts scarcely to be found. But, by industry, economy, and the blessing of God, they were enabled to overcome all difficulties, and, although not wealthy, were in easy and comfortable circumstances. From an early period they were brought up under the able and faithful ministry of the late James M'Gregor, D. D.

Robert Grant, the father of the late Dr. Grant, was for many years an elder in the church under the late Dr. M'Gregor, and the Rev. Angus M'Gillivray, from whom I have derived these facts. He was a true and steady friend, of sound judgment, and an excellent counsellor.

With regard to Dr. Grant's mother, she was worthy of such a husband. She is still living, is about seventy years of age, is a practical Christian, and a kind neighbor. Her name was Robertson; she was a native of Scotland, and emigrated to Pictou when about seven years of age.

Our late friend Dr. Grant was the fifth son of Robert and Mary Grant. At his birth, it was observed that he had a sixth small finger on one hand, which his father cut off, apprehending no danger. But, shortly afterwards, the wound began to bleed copiously, and, but for timely observation, might have terminated fatally. He was quiet from his infancy, and not robust. During the first ten years of his life, he enjoyed the united advantages of a father's guardianship, and a mother's care. When about eleven years of age, he had a remarkable deliverance from drowning in a

W. H. Grant

lake of fresh water near the family residence. Being out in a canoe with two elder brothers, for shooting water-fowl, as one of them fired his gun, the canoe upset. One brother, who was an excellent swimmer, was drowned. The other, who was the eldest of the three, and could also swim, recollecting that William the younger brother could not, remained with him, and got hold of the canoe, and sustained him by it, which was the means providentially of saving them both. Shortly afterwards, his parents, determined to give William a liberal education, sent him away from home to a neighboring school, where he studied the elementary branches, preparatory for an academical course. While at school, he was a great favorite with his companions, and a friendship was formed between himself and his teacher that continued during life. From the school he was removed to the Pictou Academy, then under the late worthy and able Dr. M'Culloch, whose favors and friendship he merited and maintained. It may be here remarked that those only who were members of the Church of England, could graduate at King's College, Nova Scotia, and no other college was permitted in the Province. Of course, Grant, and all others, who could not subscribe to the articles of that church, were excluded from its benefits. To meet this hindrance to a complete education, the Pictou Academy had been established by Presbyterians, and a thorough collegiate education was there given, though it had no authority to confer degrees.

As young Grant was advancing in his studies, he was also devoting a considerable portion of his time, during the vacancies, assisting Professor M'Culloch in providing and preparing subjects for the museum which was connected with the institution.

Grant was no less a favorite with the teachers than with his school-fellows. The Rev. Alexander Blaikie, of Boston, then a school-mate, writes: "I met with him at the academy, probably about 1824, and for several years as a student I knew him well. With us all he was a favorite at all times, known by the cognomen of Beely Grant, which name arose from the fact that, in early life, his tones of voice and pronunciation were rather nearer to those of the Gaelic than to the English. So uniform was his temper, that I never remember to have seen him in a passion. His diligence in study was commendable."

The ancestors of young Grant, in emigrating from Scotland, did

not leave behind them the primitive simplicity and piety that belonged to the cottages in the country districts of Scotland. Their descendants, the parents of Grant, maintained the same system of family worship, and his character and history were, therefore, simply an illustration of the Divine direction, "Train up a child in the way he should go, and when he is old, he will not depart from it." As of thousands of other families, the scene portrayed by Robert Burns, in "The Cotter's Saturday Night," was a fair description of the domestic worship under which he was trained.

"The cheerfu' supper done, wi' serious face,
They, round the ingle, form a circle wide,
The sire turns o'er, wi' patriarchal grace,
The big *ha' Bible*, ance his father's pride;
His bonnet rev'rently is laid aside,
His lyart haffets wearin' thin and bare;
Those strains that once did sweet in *Zion* glide,
He wales a portion with judicious care;
'*And let us worship God!*' he says, with solemn air."

It was not surprising that "the priest-like father," watching the development of religious traits of character in the son, should have intended him for the ministry. Consequently, when he had finished his academical curriculum, he commenced the study of theology under the late Thomas M'Culloch, D. D., who was at that time Professor of Divinity to the Presbyterian Church of Nova Scotia. During the first year of his theological studies, he taught school in the vicinity, and boarded at home. He was much beloved and respected by his pupils, and satisfied his employers. While thus engaged, he showed much ingenuity in making different pieces of philosophical apparatus. He made a small, but complete electrical machine of considerable power, which afforded no little amusement and instruction to his acquaintances. Indeed, his taste for some of the mechanic arts continued through life.

About this time he was seized by an attack of chorea sancti viti, which gave him much annoyance. But, by the skill and attention of Dr. James Donnelly, of the Albion Mines, he recovered. He was afterwards visited by an attack of acute rheumatism, that disabled him about two months or more. He was thus brought for a considerable season into an acquaintance with physicians, and

hence, it is thought, his attention was first drawn to this department of professional life.

Shortly after his recovery, he removed from the East River, to teach the grammar school at Antigonish, about fifty miles from his former residence. While teaching, he became acquainted with Dr. Alexander Macdonald, a respectable practitioner. After much thought, and consultation with his friends, he entered the office of Dr. Macdonald in the autumn of 1834, and commenced the study of medicine. Although he relinquished his intention of becoming a minister of the gospel, he did not become the less religious. During his residence at Antigonish, he occasionally joined the communion service with his friends at home, and was marked as a young man of sincere and decided piety.

After devoting two years to the study of medicine with Dr. Macdonald, he determined to complete his medical education in the city of Philadelphia. Accordingly, on the 29th of September, 1836, he sailed from Pictou for New York, where he arrived on the 13th of October. On the 17th, he reached Philadelphia, and immediately matriculated as a student of the Jefferson Medical College. Although he applied himself closely to all the branches of medicine, he had a special fondness for anatomy, and was skilful in dissection. He so distinguished himself in practical anatomy, that even during his second course of lectures—session 1837–38—as appears by his diary, he prepared many of the subjects for demonstration for Professor Pattison's lectures, and, although yet an undergraduate, he received the appointment of Demonstrator of Anatomy during the winter of 1838–39, which appointment he held until the summer of 1842, at which time he resigned his position for the purpose of engaging in private instruction.

In January, 1838, while assiduously engaged in the dissecting-room, he was seized with a second attack of articular-rheumatism. These attacks, no doubt, were the cause of that valvular derangement of the heart which subsequently was a source of so much inconvenience to him.

Before engaging in the arduous duties of his second course of lectures, he made a visit for recreation to his friend, the Rev. A. Blaikie, then residing at York, Livingston Co., N. Y., with whom he spent about six weeks, visiting in the mean time the Falls of

Niagara. Mr. Blaikie writes, that "his amiable disposition, inquisitive mind, and social feelings made him then very companionable." On his return to Philadelphia, he brought from his reverend friend letters of introduction to those with whom he was ever after associated, the ruling elders and members of the church now under the pastoral care of the Rev. John B. Dales. On the 2d of May following [1838], he joined the Associate Reformed Church in this city, on a certificate from the church in his native place, and November 19, 1840, he was ordained to the office of a Ruling Elder.

Amidst the engrossing occupations of Demonstrator of Anatomy, Grant presented himself, at the end of his third course of lectures, for an examination for the Degree of Doctor of Medicine, having prepared a thesis on "Topical Applications." Of this event, he writes to his brother, under date of February 23, 1839: "I have to-day received the joyful tidings of my having passed" . . . . . "The past week has been one of anxiety, both to me and many others in similar circumstances; but I can assure you that, this morning, when we received our note containing the delightful news, joy was depicted on the countenances of every successful candidate, which for some days past were all care, and uncertainty, and anxiety. I have dwelt so long on this subject, because it is to me an agreeable one; and to you, my distant friends, I anticipate it will not be much less so.

"Yesterday was celebrated throughout the Union as the birthday of Washington—and, from this day, I may reckon the birthday of my professional life—and, if I could have the vanity to suppose that I should ever be as distinguished in the medical world as he has been in the political world, it would be a fortunate coincidence. What is in the future, no mortal can tell; but I hope, by the Divine blessing, to persevere and endeavor to make myself useful to suffering humanity, by making myself acquainted with those means which the experience of others has proved to be most efficacious."

Immediately after his graduation, he engaged in collecting specimens for the Museum of Jefferson Medical College, and, at the same time was appointed by the Faculty its Curator.

On the 15th of September, 1840, Dr. Grant formed a matrimonial alliance with Miss Sarah A. M'Allister, daughter of Mr. John

M'Allister, a well-known and most estimable citizen of this city. Four children were the result of this marriage, three of whom survive him.

After his marriage, Dr. Grant visited his native place twice, and during these visits was strongly urged to settle there, with the promise of an extensive practice, and, indeed, his whole time, while there, was professionally occupied. The Rev. John Campbell, in a letter to me, says: "Dr. Grant's last visit to Pictou will not soon be forgotten. He was almost incessantly employed in healing the sick. There are excellent medical practitioners in Pictou, but so soon as he arrived, hundreds of diseased persons waited on him for advice. The poor came to him in crowds, and he did what he could for them, and did it gratuitously." In performing operations, and prescribing for the sick, he was frequently kept in the house from eight o'clock in the morning, until eight in the evening, without time even to take his meals. Instead, therefore, of these visits home being beneficial, he returned from them with impaired health.

In June, 1842, Dr. Grant undertook to embalm a human body, and, for the purpose intended, that of transportation, was perfectly successful. A gentleman from Canada, aged sixty-four years, died of cancer of the stomach, under the professional care of Dr. J. T. Sharpless, and his friends desired to take the body home in as natural a condition as possible. The weather at that period was very sultry, hot, and wet, and the body, at the time of death, very much infiltrated with water, so that all things contributed to rapid decomposition. On the day of his death, the bloodvessels were filled with a saturated solution of bichloride of mercury, and the next day, a saturated solution of the acetate of alumina was injected, which communicated to the whole body a remarkable rose-colored, life-like appearance. It arrived home on the eighth day after death, with scarcely any change, the weather during this period having been exceedingly warm, and no ice having been employed about the body. A report of the process is given by Dr. Sharpless, in the *Medical Examiner*, August 13, 1842, page 513.

Early in 1843, Dr. Grant suffered from a severe attack of inflammation of the lungs, and through the following summer continued delicate, but a visit made to the Jersey Pines was of much

benefit to him. In November of the same year, he was severely seized with inflammatory rheumatism, which lasted for three weeks. He afterwards had a relapse, which confined him to bed two weeks longer.

In the spring of 1843, Dr. Grant associated himself with others for the purpose of establishing a summer school of medicine. Although they commenced their lectures, "the first results of the enterprise were not encouraging. Several changes occurred in the association, and in the fall of the same year, Drs. Grant, Darrach, Wiltbank, and Patterson, composed its members. At this time, occurred the dissolution of the original Faculty of Pennsylvania College, and the association just referred to made overtures, both to the trustees and the late Faculty, for the reorganization of the school. Some technical difficulty existing as to the right of appointments to the vacant chairs, the new incumbents entered upon possession in virtue of an appointment by the trustees, confirmed by an instrument signed by a majority of the former Faculty, relinquishing to them and their associates all right and title whatever to the school. Thus it was that Dr. Grant assumed the responsibilities of Professor of Anatomy in Pennsylvania College, then trembling apparently on the brink of ruin. Desperate as the undertaking seemed to most, it was attempted, and a faculty of four members carried through the course of lectures, with a class of twenty-three pupils. During the session, Dr. Grant labored with untiring zeal and energy, delivering six lectures weekly upon anatomy, and three upon operative surgery, while he attended assiduously to the duties of the dissecting-room. Indeed, the regular and extra lectures amounted at times to as many as seventeen in one week. Before the close of the session, his health, already somewhat impaired, began to fail him, but he persevered to the end."* Before the opening of the next session, Dr. Gilbert and myself were added to the Faculty, at which time my acquaintance with Dr. Grant commenced.

Dr. Grant's connection with the College continued up to the day of his death. This, indeed, was the first break in the Faculty since its organization. A resignation had been communicated the previous December, but as yet had not been acted on. During his

* Biographical Notice of Professor Grant, by Henry S. Patterson, M. D., &c.

whole professional career, no member of the Faculty was more devoted to the branch he taught, nor more wedded to the interests of the Institution than Dr. Grant. None gave it more attention, none as much time. During the sessions, he was there early and late, and many times, in the ardor of his pursuits at the College building, a late hour of night would admonish him that he had not broken his fast since the early morning. Such unceasing labor, in the damp, chilling, and offensive atmosphere of a dissecting-room, was enough to impair the best constitution, or to enfeeble the most robust frame. But to Dr. Grant, who was the subject of important organic disease, it was particularly trying and hazardous. No doubt, his incessant toil, his prolonged exposure to a noisome atmosphere, and his neglect of his physical wants, operating on a diseased body, were the causes which, to a greater or less extent, always prostrated him at the termination of a session.

Dr. Grant was beloved and respected by every member of the Faculty. His amiability, his truthfulness, his probity, his high sense of honor, his amenity of manners, his intelligence, his desire to elevate the standard of medical education, his industry, and his faithful performance of the duties of his chair, endeared him to all of us. The following resolution of the Faculty, passed at a meeting held March 29, 1852, honestly expresses their sentiments, and the sense of their bereavement.

"*Resolved*, That this Faculty is deeply sensible of the loss it has sustained in the decease of one so long endeared to its members by his purity of heart, his amiability of character, his uniform kindness and courtesy, his professional zeal and ability, and his devotion to the duties of the chair of which he was the incumbent."

Dr. Grant was also a great favorite with students, both in and out of the lecture-room. He could not be considered an eloquent or elegant lecturer, but he was an excellent teacher. His demonstrations were clear, precise, and full, and his illustrations were copious and happy. He spared no means, and relaxed no efforts, to impart knowledge to his class. This was his sole aim, and of course he was eminently successful.

The parental regard manifested by Dr. Grant for students drew them towards him with cords of love. In their resolutions of con-

dolence, they appropriately style him, "our beloved teacher and friend." He omitted no opportunity of instilling into their minds proper principles of action. The abiding interest he manifested for his pupils, his style of writing, and the tenor of his own character may be equally shown by an extract from his valedictory address in 1848: "In recommending temperance and humanity, uprightness and morality, which should mark the character and adorn the life of every member of our profession, it were unfaithful in me, with the feelings of the present hour, and the anticipations of an eventful future, if I did not remind you that there is still a nobler and more essential attainment; that the *Christian* is the highest style of man, and that it is the blessing of an approving God alone that maketh truly rich and bringeth no sorrow.

"Religion is the natural element of the human mind, and its native tendencies and results ought always to characterize the medical man; at every step of his career, in every tissue and organ of his body, there is evidence of creative wisdom, power, and goodness all divine, which tells as with a sunbeam that there is a God; and from reason, Providence, and revelation alike comes a voice, which says, 'acknowledge Him in all your ways, and He will direct your steps.' 'The fear of the Lord is the beginning of knowledge.'

"When, then, you see the infection of *moral* as well as *physical* disease everywhere abroad, tending not only to disorganize and destroy the body, but striving to lay the hand of ruin upon the very being of man; and when, in infinite wisdom and love combined, the Author of our existence has provided a remedy in the gospel of his grace, which ennobles while it relieves, and is as universal and lasting in its benefits as it is in every way rich and free; accept, I pray you, the offered gift;—profess the Christian faith if you would enjoy the Christian's hope; and consider it your highest duty and greatest privilege to become students and practitioners under the guidance of the Great Physician himself."

The first meeting of the Faculty, after the termination of the Session of 1851–52, was the last one that Dr. Grant attended. This was on Tuesday evening, March 23, and was held at the house of Professor Patterson. He there recounted an occurrence which took place two or three hours before, and which, he said, was the most horrible and ghastly he had ever witnessed. He had

been visiting a patient in the southern part of the city, late in the day, when his carriage was noticed by a person in anxious search for a physician. Dr. Grant, who was always ready to attend to the calls of humanity, on being summoned, hastened to a neighboring house, around which an excited crowd had already assembled. Making his way through, he found that the object of curiosity was in a cellar. He quickly descended into the damp place, but it was so dark he could see nothing. He called for a light, on procuring which, he observed the body of a female suspended by the neck from a joist. After imploring the bystanders in vain for assistance, with the hope of saving life, he seized the body himself with one arm, while he cut the cord with the other, and, as the place was exceedingly damp, he carried the body up the flight of stairs to the first floor, for the purpose of instituting the usual restorative means. On loosening the cord, however, he discovered that, in addition to the hanging, the throat had been cut across, and, of course, all hopes of resuscitation were at an end. Her own bloody right hand, and a bloody razor lying near the spot in the cellar, told too truly that all was the work of the desperate suicide. After the adjournment of the faculty meeting, Dr. Grant and I walked home together, and the scene he had passed through seemed to have distressed him exceedingly. It had entire possession of him. Repeatedly he would exclaim: "Oh! that dreadful, dismal, horrible face! I cannot rid myself of it." He did not expect to sleep that night, as the spectre was sure to haunt his "resting-place." We separated at 12 o'clock, neither of us imagining that this unhappy scene had laid the foundation of his fatal attack.

Next day at 11 o'clock, we had an appointment for an important surgical operation. I called at his house at 8 o'clock, to remind him of it. He looked haggard and worn, complained of pain in his left chest, and of some difficulty in respiration; but he accompanied me to the door, and intended to meet the consultation.

It ought to be remarked here, that soon after I became acquainted with Dr. Grant, I, at his request, made an examination of his chest, he having been the subject sometime previously of a most serious attack of pleuro-pneumonia of the left side. There was then a very apparent want of symmetry in the two sides—the right was full, expanded, and its motions greater than usual—the

left was flattened, shrunken, and unusually quiet during respiration. The respiratory murmur was very distinct over the whole right side, and it sounded well on percussion—on the left side, the murmur could not be distinguished below the nipple, and the sound was flat; above this point the murmur was quite imperfect. There was also important organic disease of the heart, as indicated by the decided *bruit de soufflet.*

It should also be observed that Dr. Grant, for the last seven years of his life, frequently consulted me for light attacks of articular rheumatism, and also for a pain in his left chest, occasionally accompanied with cough. The former always yielded readily to wine of colchicum, and the latter to vesication and small doses of tartarized antimony.

The Wednesday morning just referred to, before leaving Dr. Grant's house, I directed him, as I had frequently done before, to apply a blister to the breast before he started out on his professional rounds. He intended to do so, but was called to his office, a few doors from his dwelling, where he prescribed for some patients; but the pain and difficulty of respiration increasing, he returned home and took his bed. The blister was then applied. His wife, becoming alarmed, sent a note by an express after me to the place of consultation, but through a mistake of the servant I did not receive it, and it was not until I returned to my office, nearly three hours after, that I was apprised of the real cause of Dr. Grant's failure to meet me. I immediately called to see him, found that he had removed the blister, had his chest well-covered with cups, and had taken several doses of the syrup of ipecacuanha. The pain and oppression had increased, there was some arterial excitement and heat of skin, and cough without expectoration. A very little crepitous râle could be detected under the left clavicle. I immediately followed the depletion by the administration of antimony, and in the evening the symptoms did not appear to have become aggravated.

On Thursday, the dyspnœa was rather increased, the cough was accompanied with expectoration, which gradually passed from a catarrhal character, to a more characteristic, viscid, and colored sputa, and the crepitous râle became more intense.

On Friday, the breathing became more embarrassed, short, and hurried; the power of speaking was impaired; the sputa had a

bright arterial color, and were so viscid that they could not be detached from the vessel; the râle under the left collar-bone had disappeared, a crepitous râle was heard over the whole lower lobe of the right lung, and the sound of the chest at that point was dull.

There being such strong evidence of the invasion of inflammation in the heretofore sound lung, I became uneasy for my patient, and at once announced, both to the Doctor and his family, my great fears as to the result, asking at the same time other medical gentlemen to be associated with me in the case. This he at first declined, but finally yielded to my solicitations, and Doctors Dunglison and Darrach were called in.

On Saturday, we flattered ourselves that there was a slight amendment in the symptoms, although the sputa had become more watery and brownish, and the pulse more frequent and feeble; but on Sunday morning of the 28th, it became too plainly apparent that death would be the inevitable termination, and this event occurred at four o'clock P. M. of that day.

A *post-mortem* examination was made by Dr. Gobrecht, on Monday evening, twenty-eight hours after death, and the following record was made upon the spot:—

The body, placed upon its back, exhibited a great depression of the whole left side of the thorax, especially about three inches below the nipple and upon the side. The left wall of the thorax was also elongated, so that the cartilaginous margin on that side was at least an inch and a half lower than that of the right side. The depression in front was so great that the cartilages of the left side formed quite an angle with the sternum, while those of the right were not depressed below the level. The chest and abdomen were now opened. There was very little adipose matter beneath the skin. The stomach was greatly distended, and the peritoneum was engorged with black blood. The cartilages of the ribs were unusually soft, and could be easily severed close to the ribs. No anterior mediastinum was apparent. The right lung was adherent over its whole surface with delicate cellular adhesions, with occasional firm bands, becoming firmer as they were traced posteriorly. The upper portion of the right lung was pretty healthy, but in cutting into the lower portions a black frothy liquid was discharged. This portion of the lung had under-

gone red hepatization. Its tissue was readily torn, was very granular, and it sunk in water. On the left side, the pleural adhesions were so exceedingly firm that it was almost impossible to separate them. Below the region of the nipple, the pleura was converted into a leather-like, tough, white substance, from one-eighth to one-fourth of an inch in thickness. Above the fourth rib, the adhesions were most yielding; and, as they were traced posteriorly, they were the most firm. There was red hepatization of the whole upper portion of the left lung, and it was thoroughly softened. The lower portion was indurated, or carnified, and the whole lung sunk in water.

Both lungs were removed from the cavity of the thorax, and placed *en masse* in water; all sunk, excepting the upper lobe of the right lung.

The bronchial tubes were now slit open to the smaller ramifications. The mucous lining of the left bronchial tube was uniformly injected, presenting nearly a chocolate color. The ramifications going to the posterior part of the right lung had a similar aspect, but less deep in the color, while those distributed to the anterior portion were less intensely injected, the color diminishing as the air-tubes became smaller.

The pericardium contained a large quantity of reddish serum, the cardiac veins were engorged, the aorta was full of black blood, having a small clot of bleached or washed fibrine in it. The pulmonary artery contained a mass of the same kind of fibrine, about seven inches in length, and bearing the impression of the semilunar valves upon it. The right auricle was also filled with black blood, and contained a clot of fibrine. There were great thickening, and very great induration of the semilunar valves of the aorta, of the mitral valves, and also of the chordæ tendini of the left ventricle. This induration was perfectly cartilaginous.

Although Dr. Grant had a large and valuable experience, was an industrious student, and well-read in every branch of medical science, he has contributed very little to the literature of the profession. He had no love for writing. His only printed productions were "An Introductory Lecture to the Course of Anatomy and Physiology," in 1845; a "Valedictory Address to the Graduating Class," in 1848, an extract from which I have already given; and a "Sketch of the Life and Character of Samuel

George Morton, M. D.," in 1851. His memoir of Dr. Morton was in the form of an introductory lecture to the last course of lectures given by Dr. Grant. It was at the termination of the same session, that the language which Dr. Grant had used on the death of Dr. Morton, with slight variations, could have been as appropriately applied to himself: "On Sunday, the 28th day of March last, many hearts were made sad, and many cheeks were bedewed with tears, at the announcement, that Dr. William R. Grant had expired at his residence in West Penn Square, after an illness of only three or four days' duration. So unexpected and unwelcome was the news, that many at first were inclined to question its reality, and every one hoped it was not so. But, alas! it was too true. He, who was but a few days before in the discharge of his ordinary professional duties, and in his usual though feeble health, up to the very day of his fatal illness, was now numbered among the dead," &c.

Dr. Grant had some peculiar and original views respecting the fœtal circulation. As he had been repeatedly urged to write out in detail his theory of the circulation of the fœtus, it was hoped that it might be procured as authenticated by his own handwriting. But no trace of such a paper could be found. Still, I believe I am able to report Dr. Grant's views correctly, as they were given to his classes every winter. I have been greatly aided in this attempt by Dr. Young, of Bordentown, New Jersey, who made the accompanying diagram, and by Dr. Morgan, of this city,

both the private pupils of Dr. Grant; and more especially by a thesis, presented to the Faculty of Pennsylvania Medical College during the session 1848–'49, by Henry D. Graham, of Delaware. This thesis underwent Dr. Grant's supervision, and still bears the marks of his annotations.

Dr. Grant adopted the usually received opinion of the *course* of the blood in the fœtus, but, from observing a certain well-known natural phenomenon, he was led to believe that it was supplied, throughout its whole body, with a purer blood than was generally admitted. The phenomenon alluded to is: that a turbid stream of water, flowing into a clear one, does not mix with it for a long time, but, on the contrary, the turbid waters occupy the same side on which they entered, and the line of demarcation between the clear and muddy currents will be evident for a considerable time and distance. He applied this principle to the fœtal circulation, and thought it possible, and quite probable, that the blood, returning from the head and superior extremities, passing through the right side of the heart and pulmonary artery, and then through the ductus arteriosus into the aorta, did not here mix thoroughly with the arterial blood; but that the two columns of blood, venous and arterial, passed along that vessel, side by side, nearly distinct, and that the venous blood, entering the anterior part of the aorta, kept that situation until it reached the umbilical arteries, which are given off anteriorly, and, entering these, is returned to the placenta, whilst the posterior or arterial column of blood, in a moderately pure state, passes to the lower extremities.

This general view, accompanied by the diagram, which is similar to the one he used to exhibit to his class, will serve to convey some idea of the ingenious theory advanced by Dr. Grant. As, however, he left no record of his views on this subject, I think it not improper to give his theory in detail as he was in the habit of teaching it; and for this purpose, I will make free use of Mr. Graham's thesis:—

The purified blood, which has been returned by the umbilical vein, is partly distributed to the liver by the hepatic trunks, where it circulates mixed with the blood derived from the intestines, and is finally returned to the ascending cava by the hepatic vein.

The remaining portion is carried directly to the ascending cava by the ductus venosus. The two currents reunited together with

the blood from the lower extremities, are now discharged into the right auricle. But, owing to the peculiar position of the Eustachian valve, and the somewhat oblique direction of the current, the column from below passes directly into the left auricle through the foramen ovale, and thence into the left ventricle, to be distributed through the aorta to the head, upper extremities, and heart.

The blood is then returned by the coronary veins and descending cava to the right auricle, and the direction of this current is such that the Eustachian valve causes it to pass immediately, without admixture with the current from below, into the right ventricle.

That the two currents do thus cross each other without mixing, is sufficiently proved by injections, in which the two currents are made to cross when the injection is thrown simultaneously into the umbilical vein and the descending cava.

The blood is propelled by the right ventricle into the pulmonary artery, but as the lungs are not in action, the current is diverted by the ductus arteriosus to the aorta, along which it passes, together with that from the left ventricle.

Having arrived at the iliacs, a small portion is continued along the external iliacs to the lower extremities, but by far the greater portion enters the hypogastric from the internal iliacs, and is conveyed by them to the umbilical arteries.

In tracing the course of the circulation, much of the pure blood from the placenta was found to enter and circulate in the liver, which accounts for the great comparative size of this viscus. But the reason why the liver should attain so great a development, or why so much blood is caused to circulate in it, is not so easily explained. It probably effects some changes in the blood, by which its amount of carbon is diminished.

The three currents which are found in the upper portion of the ascending cava, viz., the one from the inferior extremities, that from the ductus venosus, and that from the hepatic vein, moving with different velocities, in all probability do not mix before they enter the auricle.

The greater velocity of the anterior currents, viz., those from the ductus venosus and the hepatic vein, aided by the Eustachian valve, carries them directly into the left auricle through the fora-

men ovale, while the posterior column, having a less velocity, falls into the right ventricle by the osteum venosum.

Thus the pure blood reaches the left side of the heart, nearly, if not quite, unmixed with the impure blood of the lower extremities.

From the left side of the heart, the comparatively pure and unmixed blood is sent to nourish the head and upper extremities, and also the lungs and heart itself. Hence we are prepared to understand why these parts are more highly developed than the lower extremities, which receive a less amount of pure blood; and also to see the wisdom of an arrangement, by which the organs more immediately necessary to the first exercise of an independent existence are so fully qualified to perform the important functions of innervation, respiration, circulation, and prehension.

The blood returning by the descending cava, as already observed, passes into the right ventricle, by a peculiar arrangement of the auricle of the same side, without mixing with the current from below, except only that which comes from the lower extremities.

The mass of blood at this point is entirely venous, and wholly unfit for nutrition, until it is again circulated in the placenta. To this organ it no doubt proceeds directly, by the pulmonary artery, ductus arteriosus, descending aorta, hypogastric, and umbilical arteries. After passing the ductus arteriosus, it enters the aorta at the anterior part of this vessel, and is retained at this part, without mixing with the current in the posterior part of the same vessel, which came from the left side of the heart, and which, owing to the greater propulsive power of the left ventricle, has a greater velocity, which keeps it for a time separate from the anterior current, having a less velocity. The posterior current, of course, will occupy the peripheral position by reason of its greater velocity.

That a difference of velocity in the two currents flowing side by side, may keep them for a time separate, is illustrated by the waters of the Mississippi River after it receives the dark and turbid waters of the Missouri. The line of separation between the waters of the two streams, is, for a long distance, quite distinct.

The lower extremities receive, by the external iliacs, the posterior current of pure blood, mixed, possibly, to a slight extent, with

the impure current of venous blood; and this partial admixture may account for their imperfect development. Did they not receive as large an amount of pure blood as this view shows is sent to them, it would be difficult to understand how they could be so fully developed as they are, especially if their supply is supposed to be from a full admixture of the two currents in the aorta, as the venous blood in this vessel is far greater in quantity than the pure.

By this mode of regarding the various currents, in the entire round of the fœtal circulation, we see how beautiful is the arrangement by which the embryo is nourished, and fitted for the new life upon which it is destined to enter.

At the close of fœtal life, the parts of the circulatory apparatus peculiar to intra-uterine existence become changed. At the first inspiration, the blood of the pulmonary artery finds its way to the lungs, and the ductus arteriosus, no longer necessary, becomes, in time, a mere fibrous cord. The foramen ovale becomes closed by the current of blood now coming from left to right through the pulmonary veins, which before had been empty, but now filled by the dilatation of the lungs and their consequent circulation; pressing the valve against the opening, and closing the same until it finally becomes a part of the auricular septum.

By the tying of the cord, the blood is diverted from the hypogastric arteries, and also from the ductus venosus, which ultimately become impervious; and the circulation, losing its peculiarities, becomes identical with that of the adult.

Dr. Grant was a member of the "County Medical Society," the "College of Physicians," the "American Medical Association," the "Academy of Natural Sciences," and the "St. Andrew's Society."

Before concluding this sketch of the life of Dr. Grant, I may observe that my acquaintance with him very soon ripened into a very intimate and profitable friendship, which continued to the day of his death, never having been interrupted for a moment. He had many excellent traits of character, which shone in every relation of life. As a member of the profession, he was a noble example of good principles and of good actions. His intercourse with his brethren was marked by the strictest integrity, a nice sense of honor, a close observance of medical ethics, united with

a most kind and courteous demeanor. No man was more ready to assist a professional brother, either by his advice, his hands, or by any other means in his power. Few could render more valuable aid—as he possessed a very suggestive mind, an inventive genius, and a ready hand. In the exercise of this noble spirit, I have known Dr. Grant to accompany a professional friend at one time to Connecticut, at another to the City of Washington, to assist in surgical operations, and repeatedly to sit up night after night with the patients of other physicians, when there was not the least expectation of pecuniary reward. He always manifested as deep interest in these cases, as if they had been his own.

In the sphere of his own practice, Dr. Grant was greatly beloved —I might almost say idolized. His tender conscientiousness, his disinterested and self-sacrificing spirit, his anxious, laborious, and unceasing efforts, his kind and gentle manner, and his warm sympathizing heart endeared him to all. He loved his calling; and in his devotion to its practical duties, he seemed to forget self. The poor occupied his care and attention as much as the rich. No matter what the circumstances, if affliction and distress were present, he never tired in his ministrations for relief. Dr. Grant was professionally honest. He never intentionally deceived patients; on the contrary, he was ever careful to announce their true condition, and counsel them accordingly. These qualities gained upon the affections of his patients to such an extent, as emphatically to make them lasting friends.

Dr. Grant was not only an honorable, kind, devoted, and honest physician, but also a Christian. Indeed, his life was a combination of the amiableness of human nature, in its best phases, with "the fruits of the Spirit." His own pastor, the Rev. J. B. Dales, thus publicly speaks of him: "In his religious character, Dr. Grant was exemplary and useful. In Session, in Presbytery, and in the Synod—in the chambers of the sick, and the houses of the poor—in the loneliness of the stranger, the sorrows of the afflicted, and the wants of the needy, he was uniformly regarded as the wise counsellor, the true friend, the sincere Christian. In his death, a pastor mourns an Aaron or a Hur, who was ever ready to hold up the hands that would tremble under the toil and weight of ministerial duty. A Session mourns a brother, who was zealous for the purity of God's house, the spiritual welfare of his people, and the

advancement of the cause of righteousness and truth. And a church mourns a fellow-member, who loved the gates of Zion, and was ever ready to weep with them that wept, and rejoice with them that rejoiced."

Dr. Grant was greatly indebted to his good moral and religious character, for his rapid advancement in his profession. He possessed superior natural endowments, it is true—endowments which he cultivated with industry and conscientiousness, and which particularly fitted him for the medical profession; but all these mental gifts and acquirements were accompanied and hallowed with the graces of the true Christian. His gentle and courteous manners, his mild and unassuming deportment, his firm and unobtrusive character, could hardly fail to command the confidence of all who became acquainted with him, and secure for him a high place in their esteem.

I have failed in describing his character and his virtues. His faults were few, his excellences many. In him were well illustrated the exemplary citizen, the affectionate parent, the kind husband, the skilful physician, the faithful friend, and the true Christian.

Stated Meeting, April 6, 1853.

Dr. Meigs, Vice-President, in the chair.

Present, twenty-seven members.

Fleetwood Churchill, M. D., of Dublin, was elected an Associate.

The Librarian announced the receipt of the following works:—

Prize Essay, History and Chemical Investigation of Maize, or Indian Corn, by J. H. Salisbury.—From the Author.

A Discourse on the Life, Character, and Services of Daniel Drake, M. D., by S. D. Gross, M. D.—From Dr. C. D. Meigs.

Dr. Keating described a case of well-marked typhus fever, with the characteristic petechial spots, which lately fell under his care. The patient was a female, residing in South below Seventh. Under a course of gentle stimulants, the case appeared to be progressing favorably—the tongue becoming moist and the prominent symptoms abating, when on the 10th day of the disease an extensive swelling of the left parotid gland occurred. The swelling was hard, not œdematous, as is the case usually when swelling of the gland occurs in the course of exanthematous affections. Soothing and emollient cataplasms were directed to the swollen gland, with a continuance of the previous general treatment. In the afternoon of the same day erysipelas of the face, extending to the tongue and fauces, made its appearance, under which the patient rapidly sank, and died within from six to eight hours from the appearance of the erysipelas. The doctor considered the case an interesting one, and, as it seemed to him, somewhat peculiar, from the sudden occurrence of parotiditis, followed very speedily by erysipelas, at a period when the original disease had to all appearance assumed a favorable aspect, and from the rapidity with which death ensued after the appearance of the erysipelas.

The extensive prevalence for sometime past of parotiditis and of erysipelatous inflammation, was adverted to by some of the Fellows present.

Dr. CONDIE called the attention of the College to an affection of which, within a few weeks past, he had met with several cases, all of them in children between five and fifteen years of age. The patients were presumed by the parents to be laboring under measles; and in all an eruption was present upon the back, below the scapulæ, around the loins, and upon the front part of the upper and lower extremities, especially in the neighborhood of the elbow and knee joints, having a very great resemblance to the eruption of measles, but somewhat more elevated and uniformly diffused. In none of the cases seen by Dr. Condie, was there any eruption upon the face, neck, breast, or abdomen. There was no suffusion of the eyes, cough, nor any increased heat or dryness of the skin. The thirst was augmented, and the pulse increased in frequency and quickness. The tongue was somewhat red and slightly furred; the bowels were in general constipated, though when stools were procured, these were not unhealthy in appearance. There was no appetite for food, and the nights were passed without sleep. The eruption was in every case attended by muscular pains, excited by the slightest movement of the body or limbs, and causing the patients to utter piercing screams, whenever such movements were attempted. The cases in many respects bore a close resemblance to the disease termed *dengue*, as described by several of the physicians of the Southern and Western States. The cases readily yielded to the simplest treatment; in all instances, at the end of forty-eight hours the eruption had disappeared, and the muscular pains become so far abated as to allow the patients to turn themselves in bed, or even to sit up, without much inconvenience; and at the end of the third day they were perfectly convalescent. The only case in which the disease has continued beyond the period mentioned, is one now under treatment; in this the eruption and pains commenced two days before the patient was seen by Dr. Condie, and still, at the termination of the fourth day, continued with but slight diminution. This case had, however, more of a rheumatic character than the preceding ones.

Dr. HAYS has seen cases attended with an eruption very much resembling measles, but unattended with cough or the watery eye so generally observed in the latter disease; the eruption was principally confined to the trunk and limbs. These cases all ter-

minated favorably upon the fourth day. They did not, however, bear any resemblance to dengue, being unattended by the pains which formed so prominent a symptom in the cases referred to by Dr. Condie.

The subject of the mode in which the formation of the blood in the fœtus in utero is effected, was introduced by Dr. MEIGS, and gave rise to a brief discussion.

A Proposition (42) for Fellowship was presented.

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